

Failure to Engage: The Regulation of Proprietary Trading Systems

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Like much of the world, the securities business has been dramatically affected by the development of computer technology. In an industry where speed and information are the tools of the trade, computer systems that increase traders' ability to gather information and execute faster trades have been welcomed and widely applied. The role of computers has taken a variety of forms. The National Association of Securities Dealers Automated Quotation (NASDAQ) system market, which is currently the second largest volume market in the United States, has no single physical location and is almost exclusively computer-driven. Even the more traditional physical exchanges like the New York Stock Exchange (NYSE) have computerized many of their functions.

This Article will focus on one new development in the convergence of computer technology and the securities industry: the emergence of proprietary trading systems (PTSs). PTSs are for-profit systems, owned by broker-dealers or other private entities, that offer traders an alternate market, or exchange facility, in which to execute trades. While the volume of trading on PTSs is relatively small, these systems represent the beginning of a new trend in securities trading and may be a harbinger of broader changes. The Securities and Exchange Commission (SEC) has highlighted the unique regulatory problems presented by the recent explosive growth of these systems in its "Market 2000" report and has promulgated a new rule to increase reporting requirements for these systems. More recently, the SEC has proposed another regulation aimed at increasing public access to information about trading interest displayed in these systems. Many issues, however, remain unresolved, and the SEC has promised to monitor carefully the development and growth of these systems.

The SEC has struggled to fashion the appropriate regulatory approach to these systems for more than 20 years. This Article will argue that the SEC's approach, current and past, has been both inconsistent and ill-advised, suffering both from political pressure from the PTSs themselves, but more importantly from the SEC's historical reluctance and inability to deal with the overall structure of securities markets. In approaching the PTS issue, the SEC has

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emphasized that PTSs are used primarily by sophisticated investors, for whom the SEC has typically provided lower levels of regulatory protection. In doing so, however, the SEC has failed to address the effect of these systems upon the operation of the securities market as a whole. The result is an unstable balance between encouraging these systems to develop fully while at the same time integrating them into the current regulatory framework.

Part I outlines the historical context for the PTS debate, delineating both the regulatory structure for securities markets and the major policy issues. Included in this discussion is the 1975 congressional enactment of Amendments to the 1934 Securities Exchange Act,¹ which established the "National Market System" goals that have shaped much of the rhetoric in the PTS debate. This Part also discusses the changes in investors and markets since 1975 that have created the current state of the securities markets, and highlights those changes that have encouraged the development of PTSs, which in turn are part of a broader transformation in the markets that poses new regulatory challenges for the SEC. Part II details the various PTSs and discusses the relationship between their development and two particular policy issues: the trend toward "market fragmentation," and the intramarket competition with the existing self-regulatory organizations (SROs). Part III outlines the regulatory structure for PTSs and argues that the SEC's regulatory efforts have been inconsistent and inappropriate. This part also critiques the SEC's "Market 2000" recommendations and the Commission's recently released rule, and discusses the need for a different approach to the PTS issue. Finally, Part IV offers an alternate regulatory approach to balance more successfully a desire to encourage the growth of these systems with the need for regulatory oversight.

I. BACKGROUND

A. *Primary Functions of the U.S. Securities Market: The Centralized Model*

From the inception of the modern system, equity securities in the U.S. have been offered and traded in several different places, which were designed to operate as relatively centralized markets.² A centralized system is designed to enhance a variety of market functions, including increased capital liquidity, accurate price discovery, best execution monitoring, and increased transparency. In recent years, commentators have noticed a trend toward more "fragmented" markets that may inhibit some of these efficiencies.³ Much of

1. Securities Act Amendments of 1975, 15 U.S.C. § 78k-1(a)(2) (1995).

2. See, e.g., Development of a National Market System, Exchange Act Release No. 14,416 [1978 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 81,502, at 80,026 (Jan. 26, 1978). A "centralized" market is one where all (or substantially all) of the buyers and sellers of securities meet in one place or through one mechanism.

3. "Market fragmentation" occurs when a security is traded in more than one market, such that the supply and demand do not meet contemporaneously in one central location. Market fragmentation

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the debate regarding PTSs centers on their potential threat to some of these essential functions.

1. *Liquidity*

Providing liquidity is one of the most important and highly touted functions of the U.S. securities markets. In theory, centralization increases liquidity by ensuring that more buyers and sellers are meeting in one place, thus increasing the chances that a particular transaction will take place. The investors' confidence in their ability to liquidate quickly equity interest in U.S. businesses encourages them to hold their savings in such investments rather than in other types of financial instruments such as savings accounts. This incentive, in turn, lowers the cost of capital for corporations choosing to offer themselves for sale in the public markets. Liquidity also facilitates corporate governance by allowing individual investors to register their disapproval of corporate action by selling the security and, if done en masse, lowering the price of the security.⁴

By contrast, less centralized markets can lead to decreased liquidity for any particular issue of stock. Because an order in any given market is interacting with fewer contra offers, which are appearing in other, non-linked markets, it is less likely that a successful match will result.⁵ Thus, an investor holding any given security, particularly one with a relatively thin market, will not be able to sell as easily, making the investment riskier and capital more expensive. This phenomenon has a self-fulfilling aspect to it: as liquidity decreases, market makers and floor specialists become increasingly reluctant to take positions in certain issues to cover supply and demand gaps because those positions may be more difficult to unload later.⁶ The reduction of market maker activity further reduces liquidity.

2. *Price Discovery*

Active and centralized trading markets also provide a valuation tool. If all buy and sell orders interact at a single place, the determined price for a security will reflect the true supply and demand in the total market, rather than the supply and demand in any single portion of the market. Accurate pricing

can happen both geographically (i.e. the security is traded in more than one market) or temporally (i.e. the securities are traded continuously rather than allowing all supply and demand to meet at one point in time). Junius W. Peake & Morris Mendleson, *Comments on Securities Exchange Commission Release No. 34-30920*, 15-16 (Nov. 3, 1992) (available in the SEC Public Document Room S7-18-92).

4. See JAMES D. COX ET AL., 4 SECURITIES REGULATION (1991).

5. See DIVISION OF MARKET REGULATION, SECURITIES EXCHANGE COMMISSION, MARKET 2000: AN EXAMINATION OF CURRENT EQUITY MARKET DEVELOPMENTS, Study III, at III-1 [hereinafter MARKET 2000].

6. But see Minder Cheng & Anath Madhavan, *In Search of Liquidity: Block Trades in the Upstairs and Downstairs Markets*, NYSE Working Paper 94-02, 48 (Oct. 1994) (finding that NYSE floor is still highly liquid, even for large block transactions, indicating that specialists are holding large inventories).

allows securities to be properly valued for tax and collateral purposes. More importantly, the competitive securities market, at least in theory, prices securities based on the information about the company that is in the marketplace. Centralized trading ensures that the price reflects the real worth of the underlying corporation as determined by the entire market. Thus it assures that capital is most efficiently distributed across the spectrum of available investments.⁷

3. *Best Execution Monitoring*

Registered brokers in the U.S. are required to provide their customers with the "best execution" of their orders: when a security is trading in more than one market, they are required, with reasonable effort, to buy or sell the security in the market where the price is most advantageous to the customer.⁸ The greater the number of prices in the market, the more the individual investor will have to rely on an intermediary to find the best price. If the individual investor is to monitor the diligence of the intermediary in doing so, she will have to monitor multiple markets herself. Centralized trading lowers both the intermediary's search costs and the customer's monitoring costs.

4. *Best Execution and Opportunities for Price Improvement*

Some advocates of centralization have also argued that the central market should operate, like the NYSE, on auction principles. They argue that the auction market provides investors with an opportunity for "price improvement." The order can interact with other orders on the floor of the exchange and potentially reach a price that falls between the currently displayed best bid and best offer.⁹ In contrast, dealer markets, such as the National Association of Securities Dealers (NASD), do not provide such opportunities for execution between the spread. Moreover, fragmented markets reduce the opportunities for price improvement because fewer orders are interacting on the floor of the central exchange and, to the extent that some orders are displayed only in one other segment of the market, those orders do not get a chance to interact with

7. According to the "efficient capital markets" (ECM) hypothesis, the securities market will price securities based on their underlying value. The validity of this theory has been challenged: the presence of "noise" in the marketplace leads to inaccurate pricing as analysts and investors are unable to distinguish valuable information from irrelevant information. For a more detailed discussion of the ECM and its critics, see, for example RICHARD A. BREALEY, *PRINCIPLES OF CORPORATE FINANCE* 293-97 (1991). See also Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549 (1984).

8. See Order Execution Obligations, Exchange Act Release No. 36,310, 60 Fed. Reg. 52,793 (Oct. 10, 1995).

9. MARKET 2000, *supra* note 5, app. VI, at AVI-16; *National Market System: Hearings Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce*, 103d Cong., 1st Sess. 67, at 71-72 (1993) (prepared statement of William O. Donaldson, Chairman, NYSE) [hereinafter 1993 House Hearings]. The NYSE's arguments about price improvement have been aimed primarily at the growth of the NASDAQ market with competing market makers. However, some similar fragmentation concerns could extend to PTSs.

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orders in the auction market and achieve price improvement.¹⁰ The actual price improvement that is available in an auction market, as well as the actual lack of such price improvement in a “fragmented” market, however, are open to substantial debate.¹¹ Beyond price improvement, fragmented markets may not adequately deal with universal limit order protection or time priority rules.¹²

5. *Achieving Centralization: Transparency*

A centralized trading market can be achieved by having only one market or by having various markets completely linked by an external computer system, the so-called “black box.”¹³ Transparency refers to the ability of the public to see volume and pricing information about trading in the public market on a real-time basis.¹⁴ Transparency can help achieve the benefits of centralization in a market with geographically separated trading centers. With regard to price discovery, for instance, as information regarding trading prices and volume is widely and quickly distributed, investors can see the “real” price at which a security is trading and react accordingly, helping to reach the true equilibrium price of the security at any given moment. Transparency can achieve this uniform pricing across markets without physically linking the markets.¹⁵ Transparency also allows individual investors to monitor best execution by their intermediaries and may increase liquidity by enhancing the integrity of the markets.¹⁶

10. Order Execution Obligations, *supra* note 8, at 52,792.

11. While the NYSE argues that the auction market is the only forum that offers investors the ability to achieve prices between the spread, only 22% of trades on the NYSE are between the spread. MARKET 2000, *supra* note 5, exhibit 39 (giving data for the week of May 10-14, 1993). The NYSE, however, has frequently challenged the use of this number. Instead, it prefers to focus on trading in issues where the spread is only 1/8. In this sector of the trading, 70% of NYSE trades are between the spread. The NYSE argues that this is where the real benefit of the auction market, where it is possible for trades to meet within the smallest possible spread, is seen. Letter from James E. Buck, Senior Vice-President, NYSE, to Jonathan G. Katz, Secretary, SEC (Jan. 19, 1994) (unpublished letter on file with author). In contrast, prices on some of the PTSs are by design executed at the midpoint of the spread. This opportunity for price improvement, however, would be available only to the sophisticated and professional investors who have access to those systems.

12. MARKET 2000, *supra* note 5, Study III, at III-2. This problem has been discussed with respect to PTSs. 1993 House Hearings, *supra* note 9, at 299 (joint statement of the American, Philadelphia, and Pacific Stock Exchanges).

13. See, e.g., COX, *supra* note 4, at 1286-89 (discussing SEC's rejection of “black box” approach to create one market). This approach was never adopted in the U.S. which, even from the onset of securities regulation in 1934, had multiple market centers that had developed along local lines.

14. The SEC refers to both “pre-trade transparency,” regarding trading interests (firm quotes and limit orders), and “post-trade transparency,” regarding the price and volume of complete transactions. MARKET 2000, *supra* note 5, Study IV, at IV-2.

15. *Id.* at IV-3.

16. Liquidity is enhanced because individual investors may have more confidence to participate in a market they can see and understand and because the risk to market makers is reduced (as they are less fearful of institutional investors trading on inside information about trading in the institutional market), leading to lower spreads. *Id.* at IV-3. See also Order Execution Obligations, *supra* note 8, at 52,793 (discussing the benefits of increased transparency).

The SEC has increased its focus on this transparency in recent years and devoted an entire section of its recent "Market 2000" study to an analysis of transparency issues.¹⁷ The SEC considers increased transparency necessary for the efficient functioning of centralized markets and has taken specific steps toward this goal.¹⁸ Commentators, however, have criticized the SEC's approach to transparency for several reasons. First, "there has been confusion as to whether transparency should be a specific objective of regulators or instead is one result of the process of competition between financial exchanges."¹⁹ Second, it is contended that complete transparency is not a proper goal for the SEC.²⁰

While transparency can help mitigate the effect of market fragmentation, it works only when all the markets are subject to similar real-time reporting requirements and readily display both pre-trade and post-trade pricing information. Market fragmentation inhibits transparency by allowing various participants to hide their transactions more easily. The existence of off-exchange trading environments, including the "upstairs" block trading at the NYSE, PTSs, and foreign markets, some of which are subject to a lower standard of real-time reporting than the regular markets, decreases the level of transparency in the market.²¹ Thus, to the extent that the SEC is relying on transparency, rather than physical centralization, to achieve certain market goals, increased trading in these alternate markets may create problems.

Finally, market participants have been quick to point out the disadvantages of forcing greater transparency. Many institutional investors are opposed to increased transparency, particularly with respect to block trading, on the grounds that such trading is "informationless," yet causes short-term price

17. One commentator notes that the term "transparency," as well as its status as an issue with merit, is a relatively new phenomenon, although the underlying concepts contained in the term have been discussed by the SEC for many years. He posits that the recent attention on this issue is due to an increased use of computer technology in securities trading, which not only makes real-time reporting a feasible idea, but also makes such information more valuable in a fast-paced and volatile trading environment. J. Harold Mulherin, *Market Transparency: Pros, Cons, and Property Rights*, in *MODERNIZING U.S. SECURITIES REGULATION: ECONOMIC AND LEGAL PERSPECTIVES* 375 (Kenneth Lehn & Robert W. Kamphuis, Jr. eds., 1992).

18. See, e.g., *MARKET 2000*, *supra* note 5, Study IV, at IV-1 n.1.

19. Mulherin, *supra* note 17, at 376.

20. Mulherin calls this the "paradox" of transparency: if prices are perfectly transparent and thus perfectly priced, there is no benefit to be derived by discovering new information. Thus, faster access to pricing information reduces an individual investor's incentive to do independent analysis, which will reduce the actual amount of information communicated through pricing. *Id.* at 377.

21. Note that transparency can also be impeded by the individual trading strategies of the participants themselves. In a continuous auction market like the NYSE, there are risks for the individual investor to display a trading interest, by placing it on the limit order book, for example. If the price is too low, it will be plucked off immediately, and if the price is too high, the investor will risk being passed over and left holding an unwanted block. Thus, each individual investor would like a market where her own interest was hidden while everyone else's was displayed. Given this situation, individual investors will be reluctant to reveal true trading interests to the market, thus decreasing "pre-trade" transparency. Robert A. Schwartz, *Competition and Efficiency*, in *MODERNIZING U.S. SECURITIES REGULATION: ECONOMIC AND LEGAL PERSPECTIVES* 385 (Kenneth Lehn & Robert W. Kamphuis Jr. eds., 1992).

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volatility. These investors argue that since their trading is done primarily with respect to indexing adjustments rather than based on evaluations of the underlying business performance, it does not communicate the kind of information that is important to price discovery and capital distribution.²² As the SEC points out, however, the marketplace can determine the information value of such trading and decide whether or not to react to it.²³ In response to claims that they unfairly benefit from fragmentation because they can participate in the public market with inside information on trading in the private institutional market, institutional investors counter that the immediate market price fluctuation that follows announcement of a large block trade to the floor is only temporary, and that the price usually adjusts immediately, so there is no real benefit to the institutions that are trading on inside information. The SEC questions this analysis. It argues that in a truly efficient market there should be only one price at any one time, and any price differential, for whatever reason, provides an opportunity for arbitrage-type profits that impose a cost on the system.²⁴ Finally, opponents argue that increased transparency on the organized markets will force trading even farther off-exchange, possibly to the fourth market or foreign markets. As these trades will never be reported, the overall level of information reaching the market will decrease.²⁵

B. *The Markets*²⁶

1. *The Primary Exchanges: NYSE and AMEX*

The New York Stock Exchange is and always has been the dominant securities market in the U.S. In 1993, the NYSE accounted for 82% of the consolidated tape trading volume in NYSE stocks and 70% of the reported consolidated tape trades.²⁷ This represents \$2 trillion worth of trading during that year.²⁸ In addition, the NYSE also represents the largest chunk of the total market capitalization in the U.S., \$4.54 trillion, which outstrips all other

22. MARKET 2000, *supra* note 5, Study IV, at IV-4; *see also* Letter from Peter C. Clapman, Senior Vice-President, TIAA-CREF to Jonathan G. Katz, Secretary, SEC (Nov. 20, 1992) (available in SEC Public Reference Room, File No. S7-18-92) [hereinafter TIAA-CREF Letter]; Letter from Dewitt F. Bowman, Chief Investment Officer, CALPERS to Jonathan G. Katz, Secretary, SEC (Oct. 15, 1992) (available in the SEC Public Reference Room, File No. S7-18-92) [hereinafter CALPERS Letter].

23. MARKET 2000, *supra* note 5, Study IV, at IV-4. A recent empirical study has shown that the price reaction to block trading is smaller than may have originally been thought. Cheng & Madhavan, *supra* note 6, at 3 (suggesting that the trading is "informationless" and the market treats it as such).

24. MARKET 2000, *supra* note 5, Study IV, at IV-4.

25. *See, e.g.*, Mulherin, *supra* note 17, at 379.

26. This Section will focus on markets that trade in primarily equity issues. There are, however, other exchanges, such as the Chicago Board Options Exchange (CBOE), that facilitate trading only in options and futures.

27. NEW YORK STOCK EXCHANGE, 1993 FACT BOOK 26 (1994) [hereinafter NYSE FACT BOOK].

28. *Id.* at 13; *see also* MARKET 2000, *supra* note 5, exhibit 13 (Jan. 1994) (estimating the average daily dollar volume of trading on NYSE in 1992 at over \$6.5 billion, compared to slightly more than \$3.5 billion for next largest market, NASDAQ).

markets combined.²⁹

The NYSE is an auction market; it has a physical exchange floor where customers' orders interact directly with one another through their brokers, or interact with the floor specialist who is making a market in the particular security.³⁰ The specialist post acts as a meeting place for all brokers interested in a particular issue. The specialist manages the supply and demand flow in the issue. The specialist also keeps the limit order book where customers can enter and display their orders for holding until the buy/sell price is met.³¹

In addition to the NYSE, the American Stock Exchange (AMEX) is also considered a "primary" exchange, although it does not have nearly the trading volume of the NYSE. AMEX does not provide a market for NYSE-listed companies, but instead lists companies independently.

2. *The Other Exchanges: Regional Exchanges, NASDAQ, and the Third and Fourth Markets.*

The NYSE competes with several other markets, including the regional markets, the third and fourth markets, and the PTSs for volume in its own securities. There are five other exchanges, like the NYSE, which are auction markets with physical trading floors. These are generally referred to as the "regional" markets, and include the Boston Stock Exchange (BSE), the Philadelphia Stock Exchange (Phlx), the Cincinnati Stock Exchange (CSE), the Chicago Stock Exchange (CHX),³² and the Pacific Stock Exchange (PSE). These markets handle about 20% of the trading in NYSE securities; most of it, however, is at the best bid/offer on the Intermarket Trading System (ITS), thus limiting their role in price competition for the NYSE.³³ Trading of NYSE-listed securities also takes place in the so-called "third market." Although the third market has not been consistently defined in the literature, the SEC has referred to over-the-counter (OTC) trading of exchange-listed securities as such a third market.³⁴ This trading accounts for a fairly small portion of volume (7.4% of NYSE volume in 1993), and is primarily in small

29. NYSE FACT BOOK, *supra* note 27, at 8.

30. Note that under NYSE rules, the specialist is *required* to make a market in the security to cover gaps in supply and demand and must maintain strict capital reserves in order to serve this function. Supporters often point to this role of the specialist in helping the NYSE act as the market of last resort and allow it to continue operating during periods of crisis. See, e.g., Lawrence M. Benveniste, *Why the National Exchanges Provide Superior Information Flows and Pricing*, in MODERNIZING U.S. SECURITIES REGULATION: ECONOMIC AND LEGAL PERSPECTIVES 421 (Kenneth Lehn & Robert M. Kamphuis, Jr. eds., 1992).

31. The specialists' control over the limit order book has been the subject of some allegations that specialists sometimes fail to reveal actual trading interest in a security, thus tainting the market price. See Jeffrey Taylor et al., *Little Guy Lost*, WALL ST. J., Nov. 4, 1994, at A1; Order Execution Obligations, *supra* note 8, at 52,792-93.

32. The Midwest Stock Exchange was renamed the Chicago Stock Exchange in 1993.

33. MARKET 2000, *supra* note 5, Study II, at II-8.

34. *Id.* at II-10.

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orders executed by discount brokers.³⁵

Finally, the “fourth market” refers to trading done without any intervention by a market professional, either directly between institutional investors or internal crossing between accounts within a single institution.³⁶ The fourth market includes trading in any issues, including both NYSE and NASDAQ listings. Institutional investors engage in these transactions to avoid the market impact of exposure and the commissions paid to intermediaries. Because these trades are not run through an institution with reporting requirements, like a broker-dealer or an exchange, they are invisible to both the regulatory authorities and the market in general. Thus, they present possible problems for both the efficiency and accuracy of the public markets, and for regulatory authorities. Many of the concerns about fourth market trading have also been articulated with respect to PTSs. Although the size of this market cannot be measured accurately, the SEC estimates that it accounts for several million shares a day,³⁷ and institutional money managers note that this process has been operating for years, despite its logistical difficulties.³⁸

The NYSE’s major competitor for listings is NASDAQ, which, although it is the second largest market in the U.S., is not an “exchange” registered under section 6 of the Act, but rather is regulated as a “national securities association” under section 15A of the Act.³⁹ All brokers and dealers must be members of a national securities association,⁴⁰ and currently there is only one such organization, the National Association of Securities Dealers (NASD). The NASD owns and operates NASDAQ, which is an automated interdealer quote system. It has no physical location or trading floor, and instead of offering continuous trading facilitated by a designated floor specialist, the NASDAQ market depends on dealers who act as “market makers” in a particular security. These market makers offer to buy or sell at “firm” prices entered on the NASDAQ system, which is sometimes referred to as a “dealer” market. These prices are then displayed on the screens of terminals located on the desks of other brokers and dealers. For the majority of trading, brokers or dealers wishing to execute a transaction with one of the market makers must pursue the execution through telephone communication. Unlike on the NYSE floor, where there is just one designated specialist making a market in a particular security, any dealer can make a market in a security on NASDAQ provided they follow

35. *Id.* at II-11.

36. *Id.* at II-13. Trading directly between institutions is sometimes referred to as the “Rolodex” market.

37. *Id.*

38. Beatrice E. Garcia, *Big Investors to Cut Costs by “Fourth Market” Trades*, WALL ST. J., May 15, 1987 (referring to an interview with the Vice President of RJR Nabisco’s pension asset manager, Robert Schultz).

39. Securities Exchange Act of 1934, 15 U.S.C. § 6 (1995). Note that NASD brokers and dealers can trade some NYSE listed securities through NASDAQ.

40. Securities Exchange Act of 1934, 15 U.S.C. § 15(b)(2) (1995).

NASD rules. Thus, for heavily traded issues, there may be more than one dealer making a market and competing for transactions. In contrast, more thinly traded issues may have only one market maker willing to buy or sell. Theoretically, this competition should make the spread smaller on NASDAQ issues, but as the recent NASD antitrust litigation indicates, there is some argument that spreads have not been reduced in proper amounts.⁴¹ Most NASDAQ stocks are subject to real time reporting to the Consolidated Tape (CT). NASDAQ is currently linked to the ITS for listed stocks that are not subject to off-board trading restrictions.⁴²

3. *Proprietary Trading Systems*

Proprietary trading systems, also known as "automated trading systems" or "broker dealer trading systems," are screen-based trading systems operated for profit by individual broker-dealers that offer automated execution in various forms and with various additional services. PTSs are used almost exclusively by institutional and other professional investors and are typically neither useful for, nor accessible to individual investors.⁴³ Generally, PTSs offer customers direct access to contra trading without the participation of intermediaries found in the other organized exchanges.

C. *The Securities Act of 1933 and the Securities Exchange Act of 1934*

The current regulatory framework for the U.S. securities markets is a product of the Securities Act of 1933 and the Securities Exchange Act of 1934 (or "the 1934 Act"). These legislative enactments established the basic regulatory structure and rules, most of which were designed primarily to protect the interests of individual investors.⁴⁴ The 1934 Act was part of the

41. Jeffrey Taylor & Warren Getler, *U.S. Examines Alleged Price-Fixing on NASDAQ*, WALL ST. J., Oct. 20, 1995, at C1. Hans Stoll has also suggested that payment for order flow may also support wider spreads by reducing price competition between competition market makers. Taylor, *supra* note 31, at A4. The NASD has vigorously denied the price fixing charges. See, e.g., Molly Baker, *NASDAQ Fights Back on Pricing Allegations*, WALL ST. J., Apr. 6, 1995, at C1. Nonetheless, NASDAQ has recently filed a rule change proposal to add a new computer trading system, "Aqcess," which will allow investors to enter small limit orders (up to 3000 shares) at prices between the currently displayed best bid/offer. These orders will be automatically displayed on all NASDAQ terminals and will be automatically executed against any contra side match. This system is currently in the public comment stage of the rule change procedure. William Power, *NASDAQ Unveils Its Aqcess Order System In Move to Aid Small Investors' Trading*, WALL ST. J., Mar. 21, 1995, at C1 [hereinafter *NASDAQ Unveils*].

42. MARKET 2000, *supra* note 5, Study II, at II-12. In 1980, the SEC adopted Rule 19c-3, which prohibited the NYSE from restricting off-board or OTC market making in securities listed on the NYSE after April 26, 1979. Prior to that time, NYSE rules prohibited OTC market makers from making a market in securities listed on the NYSE. See Off-Board Trading Restrictions, Exchange Act Release 16,888 [1980 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 82,608 (June 11, 1980).

43. The PTSs are often considered part of the "fourth market" as they facilitate direct trading between institutions. The SEC itself has specifically distinguished PTSs and the "fourth market," noting that PTS trading always involves a registered broker-dealer and thus does not create the same reporting and transparency problems of traditional "fourth market" trading. MARKET 2000, *supra* note 5, Study II, at II-13.

44. COX, *supra* note 4, at 4.

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congressional reaction to the Great Depression, the beginning of which was blamed on the 1929 stock market crash. The newly formed SEC was given regulatory responsibility for monitoring the various exchanges, which together constituted the “market.” In a unique approach, the 1934 Act adopted a two-tiered regulatory structure. In addition to the general regulatory oversight of the SEC, the exchanges were to operate under the supervision of the SROs, which are responsible for the daily operation of the exchanges and promulgate the operating rules for each exchange. The SROs themselves are then subject to oversight by the SEC.⁴⁵

With this two-tiered structure, Congress intended to strike a balance between protection of the integrity of the markets needed in the wake of Black Monday and the flexibility necessary to maintain an economically vigorous capital market.⁴⁶ The structure was also intended to balance the need for the participation of the market professionals, achieved through SRO self-regulation, and the need for an independent watchdog, the SEC.⁴⁷ To achieve these equilibria, Congress asked the SEC in its original mandate to wear two different hats. Under the first, known as the “sunlight” hat, the SEC was to encourage the disclosure of truthful and complete information by corporations so investors could more accurately assess the value of the security. The second was as a “market regulator,” a hat which envisioned the SEC monitoring the structure and functioning of the markets themselves.⁴⁸

Some commentators have argued that the bifurcated regulatory structure, in combination with the dual functions given the SEC, led the SEC to pursue its “sunlight” rule vigorously, while leaving its more “regulatory” functions to the SROs.⁴⁹ It has been suggested that the SEC did not actively oversee the decisions of the SROs, nor did it think about the structure of the markets in any systematic way.⁵⁰ The development of the rules regarding information disclosure, the prevention of fraud, and the enforcement of rules designed to

45. Generally, the SRO establishes rules governing the day-to-day operations of the markets, while the SEC provides broader regulatory goals, such as fraud prevention, and oversees the SROs activities by requiring that major SRO rule changes be submitted to the SEC for prior approval through a formal proposal and comment period procedure.

46. Walter Werner, *The SEC As a Market Regulator*, 70 VA. L. REV. 755, 757 (1984).

47. COX, *supra* note 4, at 1189-93.

48. See, e.g., LOUIS LOSS, FUNDAMENTALS OF SECURITIES REGULATION 35 (1983).

49. The SEC's failure to deal with market structure issues began early. Market fragmentation existed even in the early securities markets, created primarily by the NYSE's restrictive practices (i.e. fixed commissions and limited membership), which drove both issuers and investors to find alternative markets where trading was less restrictive. In 1936, Congress, at the urging of the SEC, attempted to amend section 12(f) to raise the standards for unlisted trading privileges (which would have concentrated trading by forcing it back to the NYSE), but the SEC, in administering these standards, was relatively lenient in order to avoid destruction of the regional and over the counter markets. Werner calls this the SEC's “first misadventure in regulating market structure” and concludes that this early failure led the SEC to shift its focus to the sunlight aspects of its authority. Werner, *supra* note 46, at 760-63.

50. *Id.*

protect investors has been actively pursued and shaped by the SEC since 1934.⁵¹ The structure of the market, including both the NYSE and the regional markets, was adopted essentially in its form as it existed in 1934. Unlike disclosure rules, which the SEC has arguably developed around a philosophical framework, the system structure is the result of market forces, with the SEC chasing behind and regulating only in response to crisis.⁵²

The original structure also created a dual role for the SROs, which has contributed to the problem of regulating PTSs. While the SEC asked the SROs to assume significant oversight responsibilities, their members rely on them to protect their turf in a competitive market environment.⁵³ This latter role may require the SROs to ask for the removal of the very regulatory restraints they are also asked to enforce. The SROs' conflict of interest may encourage them to fashion their rules in a manner that is favorable to their own interests, rather than being responsive to the needs of the national securities markets.⁵⁴

D. 1975 Amendments to the Securities Exchange Act

A "back room" crisis⁵⁵ in the 1960s, caused by the paper-driven market's inability to deal with an increasing trade volume, led to the enactment of the 1975 Amendments to the Securities Exchange Act, the first major structural reform effort since 1934. The primary focus of the 1975 Amendments was adoption of section 11A of the 1934 Act, which gave the SEC the mandate to establish a "National Market System" (NMS).⁵⁶ This term was not defined, as Congress wanted to give the SEC and market forces the ability to create the best system.⁵⁷ However, Congress outlined the goals it had for this system:

51. Norman Poser, *Restructuring the Stock Markets: A Critical Look at the SEC's National Market System*, 56 N.Y.U. L. REV. 883 (1981).

52. LOSS, *supra* note 48, at 668; *see also* Poser, *supra* note 51, at 887.

53. *See* Werner, *supra* note 46, at 779 (discussing tension between regulatory and competitive roles of SEC). The SEC and Congress have encouraged this intramarket competition in the belief that it will make the markets more responsive to customer needs and will foster innovation, as seen in the 1975 NMS legislation; *see also* MARKET 2000, *supra* note 5, Study VI, at VI-3 to VI-4.

54. *See, e.g.*, COX, *supra* note 4, at 1191-93 (discussing tension arising from SROs' regulatory duties and their own self-interest, and potential for SROs to behave in anti-competitive manner).

55. The "back-room" crisis began in 1967, when the securities markets suffered from an explosive growth in activity that placed operational strains on the almost entirely paper-driven system. As the trading activity accelerated, broker-dealers were unable to keep pace with their settlement and clearance duties, and large stacks of unprocessed security certificates began to pile up in the back offices of the brokerage houses, resulting in numerous transactions failing to take place in a timely fashion and, ultimately, the financial failure of several firms. By 1970, the system was showing severe signs of strain, with both the Dow Jones Industrial Average and the total trading volume dropping precipitously. In the study that resulted from this crisis, Congress determined that the securities industry had failed to adequately modernize or centralize its clearance and settlement procedures. The call to revamp these procedural issues ultimately led to a more wholesale discussion of the securities market structure and adoption of the 1975 Amendments. LOUIS LOSS & JOEL SELIGMAN, 5 SECURITIES REGULATION, 2482-86 (1990) [hereinafter LOSS & SELIGMAN].

56. Securities Exchange Act of 1934, 15 U.S.C. §11A (1995); *see also* Notice of Adoption of Rule 11Ab2-1 and Notice of Withdrawal of Proposed Rule 15c2-10, Exchange Act Release No. 11,673 [1975-1976 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 80,302 (Sept. 23, 1975).

57. S. REP. No. 94-75, 94th Cong., 1st Sess. 10 (1975).

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(1) create a level playing field for competition among various market participants; (2) increase the dissemination of price quotes; (3) increase the efficiency of the market; and (4) ensure “best execution.”⁵⁸

The debate over the meaning of the congressional mandate with respect to the development of the NMS illustrates the underlying theoretical tension in the regulation of the securities markets. As with the original drafting of the securities regulation laws, the current debate vacillates between the desire for centralized trading, which enhances price discovery, liquidity, and best execution, and the desire for competition among the markets that will improve the entire system through the “survival of the fittest.”⁵⁹ With the 1975 Amendments, Congress and the SEC, in its rule-making activities, seem to have sought both to encourage centralization through greater transparency and to encourage intermarket competition. The NMS legislation did not resolve this tension and thus leaves the SEC with an unclear mandate as to how to deal with an issue such as the regulation of PTSs which implicates both goals.

The SEC and the markets have undertaken several projects designed to implement the 1975 Amendments. The first, and perhaps the most successful to date, was the establishment of the Consolidated Tape for real-time reporting

58. The text of the relevant portion of the statute is as follows:

(a)(1) The Congress finds that —

(A) The securities markets are an important national asset which must be preserved and strengthened.

(B) New data processing and communications techniques create the opportunity for more efficient and effective market operations.

(C) It is in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to assure

(i) economically efficient execution of securities transactions;

(ii) fair competition among brokers and dealers, among exchange markets, and between exchange markets and markets other than exchange markets;

(iii) the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities;

(iv) the practicability of brokers executing investors' orders in the best markets; and

(v) an opportunity, consistent with the provisions of clauses (i) and (iv) of this subparagraph, for investors' orders to be executed without the participation of a dealer.

(D) The linking of all markets for qualified securities through communication and data processing facilities will foster efficiency, enhance competition, increase the information available to brokers, dealers, and investors, facilitate the offsetting of investors' orders, and contribute to best execution of such orders.

Securities Exchange Act of 1934, 15 U.S.C. § 11A (1995).

59. Werner argues that Congress was expecting the SEC to form a strong single market which would centralize all order flow in a security, thus ending market fragmentation, maximizing liquidity, and enhancing capital allocative efficiency. Werner believes that the SEC's attempt to enact this national market system has been largely unsuccessful. Werner posits that the SEC has failed in this mandate because of its early division between sunshine and regulatory capacities, and its institutional preference for neglecting the latter. Werner, *supra* note 46, at 774-80. In contrast, some commentators, and the SEC itself, believe that the original congressional vision was for a more limited system and that this limited role of the NMS is being adequately served by existing procedures and market linkages. One commentator has suggested that “Congress very carefully avoided calling for the homogenization of all markets into a central market system,” but instead called for “preserving, strengthening, and linking the existing markets.” Donald L. Calvin, *The National Market System: A Successful Adventure in Industry Self-Improvement*, 70 VA. L. REV. 785, 790 (1984); MARKET 2000, *supra* note 5, app. II, AII-11.

of trading in "eligible" securities,⁶⁰ and the Consolidated Quotation System (CQS), which collects firm quotes from the various exchanges and OTC dealers.⁶¹ The second major project, the Intermarket Trading System (ITS), electronically links eight national exchanges and the NASD.⁶² The ITS provides brokers on the floor of any participating exchange with a means of executing a trade in any of the other markets, thus allowing the broker or specialist to execute their transaction at the best displayed price. The ITS also allows all participants to enter pre-opening interest in securities that will be executed when the market opens. The participants in the ITS have developed a set of uniform trading rules in order to enhance the effectiveness of the system in actually linking the markets.⁶³

60. See 17 C.F.R. § 240.11Aa3-1 (1995). This rule requires all floor specialists and market makers executing transactions in listed securities to immediately report the size and price of those transactions to the Consolidated Tape Association (CTA) which, using the Securities Industry Automation Corporation (SIAC) (a joint venture between the NYSE and Amex), compiles this data and disseminates it to various vendors. The vendors then distribute to investors, broker-dealers, and other members of the public via computer terminals or the ticker tape. Thus, the Tape, which is constantly displayed and updated during the trading day, shows potential buyers and sellers what the most recent consolidated price, representing transactions in all different markets, is (this is known as "last sale" reporting) and, in some cases, where that sale took place. The CTA fosters centralization by creating a single "market" price for the security, rather than having several different prices in different market centers. LOSS & SELIGMAN, *supra* note 55, at 2548-54.

61. In contrast to the CTA, the CQS was designed to increase pre-trade transparency by distributing "firm" quotes in a manner similar to the CTA distribution of last sale data. The CQS, however, has been less successful. First, the rules were modified to allow regional market specialists to avoid the "firm" quoting requirements, and more generally, the disseminated quotes tend to be inaccurate because specialists underestimate their trading capacity in order to avoid posting a firm quote they cannot profitably honor. LOSS & SELIGMAN, *supra* note 55, at 2548-54. Pre-trade transparency has been hindered by the lack of a consolidated limited order book (CLOB) which would require floor specialists on the competing exchanges to enter the limit orders they are holding into the electronic link, after which those limit orders would be displayed to all markets and could be executed in any market. While the SEC has toyed with the idea of establishing a CLOB, most recently in the Market 2000 Study, strong participant objection has so far stopped a CLOB from developing. See MARKET 2000, *supra* note 5, app. II, at AII-11 to AII-12. *But see* Order Execution Obligations, *supra* note 8, at 52,799-803 (proposing changes to enhance transparency of limit orders).

62. ITS was developed as a joint project of five exchanges: NYSE, Amex, BSE, Phlx, and PSE. Three other exchanges, the CHX, CSE, and CBOE, and the NASD have joined since the beginning of operations. The NASD is linked by a computer interface with the NASD's Computer Assisted Execution System (CAES) which was developed specifically for this purpose. MARKET 2000, *supra* note 5, app. II, at AII-2 to AII-3.

63. These rules concern "trade throughs," a practice whereby a broker executes a transaction at a price that is higher (in the case of a buy) or lower (in the case of a sell) than the price being displayed in another market, exposure and splitting of block trades, pre-opening trading participation, and dispute resolution. The SEC notes that since its original conception, the ITS and the CTS have been enhanced by changes such as the adoption of Rule 19c-3 and "trade-through" rules. The SEC also notes that while the ITS exhibited problems during the 1987 crash (when it stopped functioning during the most critical periods), the system has been strengthened with updated technology and showed better performance during the 1989 crash. MARKET 2000, *supra* note 5, app. II, at AII-7 to AII-8. In conjunction with the Market 2000 study, the SEC asked for comments on the functioning of the ITS. ITS participants (such as the NYSE and the regional markets) believed that the ITS was serving its limited purpose adequately and that the system should not be expanded to include, for instance, a consolidated limit order book. On the other hand, non-participants (such as the Arizona Stock Exchange) indicated that the ITS was not functioning to increase efficiency. *Id.* at AII-9 to AII-11. The SEC, in its Market 2000 Report, generally did not support any significant expansion of the ITS system, although it did suggest that the NASD/CAES link, which is currently only for Rule 19c-3 securities trading between the OTC and the

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E. *The Current System: Changes Since 1975*

The U.S. securities markets have seen several dramatic changes since the enactment of the 1975 Amendments, which may question the continuing viability of these reforms.⁶⁴ The purpose of the SEC's "Market 2000" study, announced in 1992 and released in January 1994, was to analyze these market changes and determine what, if any, regulatory response was needed.⁶⁵

1. *Changes in Volume*

The first important change is the increase in the total volume and dollar amount of equity securities traded in the United States. In 1975, the total market value of U.S. equities was \$85 billion. By 1992, the total market value reached \$5 trillion.⁶⁶ More individuals participate in the markets today than ever before, either as individual investors or as members of the increasingly large and popular mutual funds and pension plans. More businesses are turning to the markets for their capital needs. Technological advances have allowed the markets and the market professionals to handle the increasing demand for access to the markets. Arguably, this huge growth means that the SEC, now more than ever, needs to take an active role to protect the increasing percentage of U.S. savings that are at risk in the markets.

2. *Changes in Investors*

One of the most important changes is the so-called "institutionalization" of the ownership of equity securities in the U.S. In 1975, institutional investors owned 30% of U.S. equity securities, but by 1992, they owned slightly over 50% of the market.⁶⁷ Thus, individual investors now account for less than 50% of the market.⁶⁸ A 1990 survey by the NYSE indicated that 51 million individuals in the U.S., or about 21% of the population, own corporate

exchanges, should be expanded to include all eligible ITS securities and to allow participation of OTC dealers to trade non-19c-3 securities through the ITS/CAES link. *Id.* at AII-12. Since the release of the study, the NASD has filed a rule change to comply with this recommendation. See Order Approving a Proposed Rule Change by National Association of Securities Dealers, Inc. Requiring Participation in the Intermarket Trading System by Third Market Makers, Exchange Act Release No. 34,280, 59 Fed. Reg. 34,880 (July 7, 1994).

64. Poser, *supra* note 51, at 885; Milton H. Cohen, *A Quarter Century of Market Development: What Should a New 'Special Study' Study?*, in GLOBAL CAPITAL MARKETS AND THE DISTRIBUTION OF SECURITIES, 1 A.B.A. SEC. BUS. LAW 1-2 (Franklin E. Gill, ed., 1991).

65. U.S. Equity Market Structure Study, Exchange Act Release No. 30,920, 57 Fed. Reg. 32,587 (July 22, 1992).

66. MARKET 2000, *supra* note 5, exhibit 1.

67. *Id.*, Study II, at II-1.

68. *Id.*, app. I, at AI-1. Note that many more individuals are participating through "institutional" investors, such as pension plans and mutual funds, which are discussed in the next section. This section focuses on retail investing directly in the market, which is currently about \$2.8 trillion. See Taylor, *supra* note 31, at A1.

stock.⁶⁹ This is compared to the approximately 25 million individuals that owned equity issues in 1975.⁷⁰ Individuals do not trade directly on the markets or with each other. Rather, individual investors trade through a professional intermediary, such as a broker-dealer. Many securities regulations have been aimed at protecting these individual investors from the potentially fraudulent practices of professional intermediaries who have numerous opportunities to defraud their relatively uninformed customers. The SEC rules limit the activities of dealers, who conduct trades for their own accounts and those of their customers, and require broker-dealers to offer their customers "best execution" and "suitable" securities based on the customer's investment objectives. The investors, for their part, are primarily interested in minimizing their brokerage fees. These desires have given rise to several discount brokerage houses that offer lower commissions in return for fewer information services.

Institutional investors are professional money managers or financial institutions who execute large numbers of transactions and manage large sums of money. The largest of these are the private pension plans, which in 1992 owned about 20% of U.S. equities, an increase from the less than 13% the pension funds owned in 1975.⁷¹ The second largest are the mutual funds, whose market share has more than doubled since 1975, jumping from 4% to 9.1% in 1992.⁷² Other types of institutional investors are hedge funds (typically involving less than 100 individual investors), insurance companies, and public pension funds.⁷³

The growth in the amount of money held in pension funds has led to several changes in their management that are significant for the structure of the equity markets. First, pension funds are increasingly being turned over to professional money managers who will more effectively and profitably manage the funds. This trend has increased the concentration of capital in the hands of these professionals.⁷⁴ Second, as part of their fiduciary duties, the pension funds are increasingly trying to reduce the costs of the management and are looking for competitive fee rates from brokers.⁷⁵ The tremendous size of their trading activity gives them power to negotiate for soft dollar arrangements and

69. NYSE FACT BOOK, *supra* note 27, at 85.

70. MARKET 2000, *supra* note 5, app. 1, at AI-1.

71. *Id.*, exhibit 1.

72. *Id.*

73. Public pension funds accounted for 9.1% of the market in 1992, making the total market share of all pension funds nearly 30%. *Id.*

74. *Id.*, Study II at II-2.

75. See, e.g., Garcia, *supra* note 38; Ivy Schmerken, *Wall Street's Quiet Revolution (Technology)*, WALL ST. & TECH., June 1, 1992, at 25; Bruce B. Burr, *Alternative Trading Exceeds Goals*, PENSIONS & INVESTMENTS, July 25, 1994, at 17. "A search for lower transactions costs may draw these investors to PTSs where intermediary commissions are reduced." COX, *supra* note 4, at 1322.

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lower commissions, a power that smaller individual investors lack.⁷⁶ Third, since performance of the funds is usually measured against a market index, like the Standard & Poor's 500, the funds are usually passively managed on indices,⁷⁷ which further reduces transaction costs.

The goals of institutional investors lead them to seek services that the traditional NYSE trading floor cannot offer, but which the PTSs can provide. First, the PTSs' promise of anonymity is particularly important to institutional investors since it allows them to reduce the market impact on the price of the security that would result from trading extremely large blocks of stocks on the floor. Second, in contrast to individual investors, it is often argued that the ostensibly more sophisticated institutional investors do not need regulatory protection from the market professionals because they can monitor the activities of their own brokers to ensure that their trades are well executed and fair. Thus, they are willing to trade less regulatory protection for the lower fees paid on PTSs. Finally, institutional investors were shaken by the 1987 crash, when many could not reach their dealers, who were unable or unwilling to answer the phones or make trades.⁷⁸ Thus, institutional investors welcome the trading control and direct access the PTSs give them.⁷⁹

3. *Changes in the Markets*

The markets themselves have also been changing in response to the changing demands of the investors. The most striking changes are the shift in the distribution of volume between the various exchanges and the increased use of technology by both existing and emerging markets. Although the NYSE is and always has been the largest of the equity markets, it is currently losing market share to the regionals, NASDAQ, and other markets.⁸⁰ This shift is due in part to the activities of the institutional investors who like to route their block trades through the regionals, where the specialists are less likely to interfere with the crosses or force them to be exposed to the limit order book.

76. See Taylor, *supra* note 31, at A1 (noting that since the 1975 unfixing of commissions, commission costs for institutions have dropped 75%, while retail commissions have increased 30%, now averaging almost 42 cents per share); see also Order Execution Obligations, *supra* note 8, at 52,793 (noting the lack of market power held by retail investors).

77. MARKET 2000, *supra* note 5, Study II, at II-3. In contrast, mutual funds are being evaluated on maximum performance rather than comparison to a benchmark index and thus are usually actively managed rather than indexed. *Id.*, at II-2.

78. DIVISION OF MARKET REGULATION, SECURITIES EXCHANGE COMMISSION, THE OCTOBER 1987 MARKET BREAK, 9-19 (Feb. 1988) [hereinafter 1987 MARKET BREAK REPORT].

79. Ivy Schmerken, *Off-Exchange Trading Chips Away at NYSE*, WALL ST. & TECH., Dec. 12, 1992, at 42.

80. In 1976, the NYSE's share of the consolidated tape trades in NYSE stocks was 86%. MARKET 2000, *supra* note 5, exhibit 18. But since then, it has lost ground to the regionals, whose share has risen from 11.5% in 1976 to 19.9% in 1993, and to the NASD, whose share in NYSE listed stocks increased from 2.4% in 1976 to 9.63% in 1993. *Id.* 1976 Statistics. 1993 statistics from NYSE FACT BOOK, *supra* note 27, at 8. See also James E. Shapiro, *U.S. Equity Markets: A View of Recent Competitive Developments*, NYSE Working Paper No. 93-02, 1 (Nov. 17, 1993) (discussing NYSE's share loss to regionals).

For the same reason, the PTSs often favor the regionals for execution of their trades, which are often matched within the system before transfer to the floor. The potential for increased market fragmentation that results has been met with concern by both academics and the regulators.⁸¹

As the dominance of the NYSE has been challenged by other markets, the NYSE has moved to preserve itself in several ways. First, it has vigorously defended its remaining anti-competitive rules, such as restrictions on member off-board trading activity.⁸² Second, the NYSE has made several adaptations to match the services offered by its competitor markets. These efforts include development of the "upstairs" or "off-board" market where institutional investors can negotiate large block trades without exposing them to the market,⁸³ and the addition of two after-hours crossing sessions to stem the flow of after-hours transactions to the international markets or PTSs.⁸⁴

Perhaps the NYSE's most fundamental change has been the partial automation of its functions through the addition of its Designated Order Turnaround (DOT) system that offers members the ability to execute or route orders to the specialist posts without the time-consuming process of using slips of paper carried by their floor brokers.⁸⁵ The DOT experienced a significant

81. Order Execution Obligations, *supra* note 8, at 52,792-93; MARKET 2000, *supra* note 5, Study III, at III-2 (discussing potential problems from fragmentation); Peake & Mendelson, *supra* note 3, at 20-23 (discussing potential costs of fragmentation). *But see* Lawrence Harris, *Consolidation, Fragmentation, Segmentation & Regulation* 6-25 (March 1992) (available in SEC Public Ref. Room, File No. 57-18-92) (questioning costs of fragmentation).

82. NYSE Rule 390 prohibits members from making markets in listed securities to compete with the NYSE specialists. Members can execute trades with other competing market makers. Competing market makers can only make markets in securities listed on the NYSE after April 26, 1979. LOSS & SELIGMAN, *supra* note 55, at 2592.

83. After a price agreement is reached in the "upstairs" market, the trade is then sent to the designated floor specialist, who exposes it to market orders or the limit order book at the negotiated price. Many institutions still prefer to route their block trading through the regional exchanges, who will allow the negotiated block transaction to be executed without exposure to the limit order book. The amount of block trading on the NYSE has increased dramatically. In 1975, 16.6% of trading on the NYSE was in blocks, but by 1993, 50% of NYSE trading was in these blocks. MARKET 2000, *supra* note 5, Study II, at II-7. A recent study, however, has indicated that only 27% of block trading occurs in the upstairs market, with the rest being transacted on the floor. *See* Cheng & Madhavan, *supra* note 6. This "upstairs" market has impact on the potential popularity of PTSs, most of which offer both anonymity and avoidance of market impact. Note that the SEC's recent rule proposal, which will be discussed in greater detail below, would change both the ability of investors to "hide" trading interest in the PTSs and would change the rules regarding the display of limit orders. Order Execution Obligations, *supra* note 8, at 52,794.

84. Craig Torres et al., *Big Board Mulls Early Start, Begins Late Hours*, WALL ST. J., June 14, 1991, at C1 (announcing opening of new NYSE trading sessions and noting their similarity to Instinet's and POSIT's after-hours sessions). The NYSE has recently argued that if the PTSs are to be free from regulatory restraints during their early development, then these exchange associated systems which compete with them should get a similar regulatory exemption (such as more flexible rule change procedures) which would allow them to innovate free from regulatory restraints. *See, e.g., 1993 House Hearings*, *supra* note 9.

85. William Power, *Bicentennial Battle: Big Board, at Age 200, Scrambles to Protect Grip on Stock Market*, WALL ST. J., May 13, 1992, at A1 (describing DOT and noting that SuperDOT, the newer faster version of the system, facilitates program trading, which depends on high speed execution). Evidence of destabilizing computer error during program trading concerns commentators and has been cited as an example of why the stock markets are not ready for full automation.

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operational failure during the 1987 Market Break, after which members were asked to curtail use of the system for program trading.⁸⁶ Since that time, the NYSE has enhanced and strengthened it.⁸⁷

Like the NYSE, the regional markets have also modernized their services by developing automated routing and execution systems for smaller orders.⁸⁸ One regional, the CSE, has eliminated its trading floor entirely and replaced it with an entirely computerized automated system, which makes it strikingly similar to the proprietary trading systems.⁸⁹ NASDAQ has also tried to increase efficiency through the introduction of computerization with its SelectNet program.⁹⁰ By using NASDAQ's SelectNet, users can avoid time consuming telephone conversations, and can enter buy or sell orders for execution directly into their computer terminals. SelectNet, however, is available only to dealers, a fact that annoys some institutional investors.⁹¹

II. PROPRIETARY TRADING SYSTEMS⁹²

The rising popularity of PTSs is dramatic evidence of the invasion of computer technology. Although these systems currently account for a relatively small percentage of the total markets, 1.4% of NYSE and 13% of

86. 1987 MARKET BREAK REPORT, *supra* note 78. Markets offering options trading also have automatic routing systems, such as the CBOE's Retail Automatic Execution System (RAES), which also experienced substantial problems during the 1987 Crash. *Id.* at 8-9.

87. LOSS & SELIGMAN, *supra* note 55, at 2555.

88. These systems include: Amex's Post Execution Reporting system (PER), the PSE's SCOREX, Phlx's PACE, BSE's BEACON, and CSE's National Securities Trading System (NSTS). For a more complete discussion of these systems, see LOSS & SELIGMAN, *supra* note 55, at 2556-58.

89. See Gerald T. Nowak, Note, *A Failure of Communication: An Argument for the Closing of the NYSE Floor*, 26 U. MICH. J.L. REF. 485, 507 (1993).

90. The NASD, like the NYSE, has attempted to keep pace with the technological revolution by adding some automated execution features. NASDAQ's Small Order Execution System (SOES) allows brokers to enter small orders (200, 500, or 1,000 share orders) which are automatically executed at the "inside" price. Prior to the 1987 Market Break participation in SOES was voluntary, and brokers could choose whether to execute a small order through SOES, traditional telephone trading, or by sending it to a PTS. However, the failure of SOES during the October crash led the NASD to make participation mandatory for market makers in NASDAQ/NMS stocks. LOSS & SELIGMAN, *supra* note 55, at 2589-91. NASDAQ also offers SelectNet, an automated trading system that allows broker-dealers to enter orders and then negotiate the price of execution through counter-offers entered into computer terminals, replacing the traditional telephone negotiation. SelectNet orders do not automatically appear on all NASDAQ terminals, thus allowing broker-dealers entering orders to limit the audience for display. SelectNet allows NASDAQ broker-dealers to negotiate orders inside the spread. MARKET 2000, *supra* note 5, Study IV, at IV-7. As will be seen from the description of PTSs below, SelectNet provides a service substantially similar to that offered by Instinet and other PTSs. Its operation has also raised similar regulatory concerns, such as transparency effects and fair access limitations. *Id.* at IV-8. Unlike its recommendations regarding PTSs, however, the Market 2000 Report suggested that SelectNet be more highly regulated regarding access and wider quote distribution. *Id.*

91. Taylor, *supra* note 31. The NASD has recently proposed a rule change that would allow wider viewing (although not trading) access to SelectNet. Notice of Amendment No. 2 to Proposed Rule Change by the National Association of Securities Dealers, Inc., Relating to Non-member Viewing Access to SelectNet, Exchange Act Release No. 35,428, 60 Fed. Reg. 12,583 (Mar. 7, 1995).

92. The descriptions of categories, as well as the descriptions of the individual PTSs, are derived from information found in MARKET 2000, *supra* note 5, app. IV.

NASDAQ/NMS trading volume in 1993,⁹³ their recent explosive growth, and their future potential, make them a real issue for both market users and regulators. In 1991, 2.9 billion shares traded through PTSs, but in only the first six months of 1993, that number had jumped to 4.7 billion shares.⁹⁴ A vast majority of that trading, 87%, is in NASDAQ-listed issues where use of PTSs avoids paying dealer spreads and may allow users to take advantage of the interquote prices currently unavailable on NASDAQ.⁹⁵ Investor participation in PTSs is particularly high, with TIAA-CREF, for example, recently reporting that it routes almost 75% of its orders through these systems.⁹⁶ Institutional investors are drawn to these systems because they offer both anonymity and lower commission costs without the technical hassle of fourth market trading.⁹⁷ They are particularly attractive to passive investors, such as funds managed by indexing, who do not need the continuous trading offered by the traditional exchanges.⁹⁸ Investors trading in NASDAQ stocks may also be able to use the systems to avoid paying the dealer spreads. In addition, many PTSs specialize in certain investment products for which alternative trading is not readily available, making them more versatile than the traditional exchanges.⁹⁹ This introduction of technology into the financial markets in general and the securities market specifically—a phenomenon that includes the development of PTSs—has created challenges for regulators.¹⁰⁰

93. *Id.* at AIV-2.

94. *Id.* at AIV-1. Recent numbers from the NYSE indicate that the 1994 volume in PTSs was over 6 billion shares (unpublished NYSE document on file with author). Note that all volume numbers concerning PTS trading come from the systems themselves and, to the extent that these numbers are derived primarily from advertising materials, may be somewhat inaccurate. The SEC recently promulgated Rule 17a-23, aimed at providing the SEC with more accurate information regarding the trading volume in these systems.

95. *Id.* at AIV-1.

96. Burr, *supra* note 75, at 25.

97. See Gary Weiss, *Nightmare on Wall Street: A New Rule Book*, BUS. WEEK, Dec. 12, 1992, at 96 (discussing reaction to announcement of Market 2000 Study and noting the institutional investors' support for PTSs); see also TIAA-CREF Letter, *supra* note 22; CALPERS Letter, *supra* note 22.

98. Note, however, that as money managers are more carefully scrutinized by outside consultants, their willingness to undertake the risk of a negative market effect on any trading decision that causes a delayed execution of the trade may be reduced and thus may make them more reluctant to turn to the less liquid PTSs, where execution is not guaranteed.

99. The SEC is concerned about the potential for PTSs to offer trading in instruments for which there is no other market, or in restricted securities for which special fraud concerns may exist. Recordkeeping and Reporting Requirements for Trading Systems Operated by Brokers and Dealers, Exchange Act Release No. 33,605, 59 Fed. Reg. 8368 (Feb. 18, 1994) [hereinafter Rule 17a-23 Proposal Release]. For instance, Instinet currently offers trading in 144A securities, which, the SEC notes, could potentially create problems because trading interests are broadcast to an unknown audience, which may violate Rule 144A requirements. *Id.* at 8371 (discussing potential problems with 144A trading); Letter from Charles R. Hood, Senior Vice President, Instinet to Jonathan G. Katz, Secretary, SEC 4 n.8 (Oct. 19, 1992) (available in SEC Public Reference Room File No. 57-18-92) (noting that Instinet offers trading in 144A securities). Note that this also has structural implications to the extent the traditional exchanges cannot compete with the PTSs for trading these instruments.

100. See TECHNOLOGY AND THE REGULATION OF FINANCIAL MARKETS (Anthony Saunders & Lawrence J. White eds., 1986) (discussing impact of technology on regulation of financial markets in general, including securities, futures, and banking industries).

Proprietary Trading Systems

A. Major Types of Proprietary Trading Systems

Currently, the SEC has approved 21 PTSs,¹⁰¹ primarily in no-action letters.¹⁰² Of these, only ten are presently active, seven of which trade equity issues.¹⁰³ The SEC has divided PTSs into four major categories: hit and take systems; matching systems; auction based systems; and internal order routing systems. Despite some variations, all of these systems have two characteristics in common: (1) they limit participation in their systems to professional and other sophisticated investors; and (2) they are owned and operated by a registered broker-dealer.

Hit and take systems operate primarily to provide users with an alternate market for trading in single issues. They offer customers direct access to contra traders without reliance on an intermediary.¹⁰⁴ Trading on these systems can

101. MARKET 2000, *supra* note 5, app. IV, at AIV-2. These systems include: Cantor Fitzgerald G.P., Lattice Network, CrossCom Trading Network, Instinet, Instinet's Market Match, LIMITrader, Franklin Advantage Crossing Network, Exchange Services, Inc., Arizona Stock Exchange (formerly the Wunsch Auction System), NYSAC, CapitalLink Bond Auction, RMJ Securities/Delta Government Options, ECON Investment Software, POSIT, POSIT's Volume Weighted Average Pricing Session, Adler & Co. System, NAPEX, Troster Singer Corp.'s Inside System, Transaction Services, Inc.'s TRAN System, and B&K Securities Inc.'s COPS System. MARKET 2000, *supra* note 5, app. IV, at AIV-2 to AIV-13. Of those 21 approved systems, only ten are presently active, seven of which trade equity issues. For further information regarding the active systems, see the following no-action letters and releases: Instinet Corporation, SEC No-Action Letter, [1989 Transfer Binder], Fed. Sec. L. Rep. (CCH) ¶ 78,997, at 78,920 (Aug. 6, 1986) [hereinafter Instinet No-Action Letter]; The Lattice Network, 1993 SEC No-Act. LEXIS 976 (Sept. 9, 1993); Cantor Fitzgerald, G.P., 1993 SEC No-Act. LEXIS 1248 (Oct. 1, 1993); CrossCom Trading Network, 1992 SEC No-Act. LEXIS 1065 (Nov. 24, 1992); RMJ Securities, 1989 SEC No-Act. LEXIS 21 (Jan. 12, 1989); Delta Government Options Corp., Order Granting Temporary Registration as a Clearing Agency, Exchange Act Release No. 27611, 55 Fed. Reg. 1890, at 1891 (Jan. 19, 1990) [hereinafter Delta Release]; Jefferies & Co., Inc., SEC No-Action Letter, [1987 Transfer Binder], Fed. Sec. L. Rep. (CCH) ¶ 78,515, at 77,656 (July 28, 1987) [hereinafter POSIT No-Action Letter]; Instinet Corporation, 1991 SEC No-Act. LEXIS 628 (Dec. 6, 1991) (regarding Instinet's Market Match System); Portfolio System for Institutional Trading, 1991 SEC No-Act. LEXIS 1405 (Oct. 28, 1991) (regarding POSIT's VWAP system); NAPEX Financial Corp., 1986 SEC No-Act. LEXIS 2640 (Aug. 18, 1986); National Partnership Exchange, Inc., 1985 SEC No-Act. LEXIS 2500 (Sept. 1, 1985); Wunsch Auction Systems, Order Granting Limited Volume Exemption from Registration as an Exchange, Exchange Act Release No. 28,899, 56 Fed. Reg. 8377 (Feb. 28, 1991) [hereinafter Wunsch Release].

102. The issuance of "no-action letters" is an informal process by which the SEC responds to individual inquiries regarding certain specific actions the individual wishes to undertake. The individual participant is seeking an assurance from the SEC that it will take no enforcement action if the participant undertakes the described activities. The opinion expressed in no-action letters is not binding on either private parties or the SEC itself, which reserves the right to change its opinion. COX, *supra* note 4, at 22-24.

103. MARKET 2000, *supra* note 5, app. IV, at AIV-2.

104. Customers generally access the systems from their desktops with a modem and a PC. Instinet also has terminals located on the floors of the AMEX and the regional exchanges where brokers can enter or match orders. *Id.* at AIV-3.

usually take place throughout the trading day, and sometimes after hours,¹⁰⁵ making them attractive to "active" investors.¹⁰⁶ The most popular of these systems is Instinet. Others include the Lattice Trading Network, Cantor Fitzgerald,¹⁰⁷ Crosscom Trading Network,¹⁰⁸ and Delta Government Options System.¹⁰⁹ They are generally owned and operated by a single broker-dealer, who executes and arranges for the clearing of most trades completed through the system,¹¹⁰ and provides the regulatory interface for SEC oversight of the systems. These broker-dealers are generally not members of the NYSE, but rather operate through memberships with the regional exchanges.¹¹¹

Customers¹¹² use these systems by anonymously entering either limit orders or "indications of interest." Once the orders are entered into the system, they are either executed against orders already sitting in the system, or displayed on the screens of other customer's terminals, who can then choose

105. Instinet operates an after-hours "Crossing Network" where trades are executed based on closing prices on the primary exchange, and a pre-opening "Market Match" where investors can enter orders which are executed at volume-weighted average prices. *Id.* at AIV-9. Unlike Instinet's other services, which are "interactive" and are at least arguably "discovering" prices independently of the NYSE as the supply and demand interacts within the system, the after-hours trading sessions derive their pricing directly from the NYSE.

106. Unlike "passive" investors, who make trading decisions based on liquidity needs and indexing and portfolio risk strategies, "active" investors make trading decisions based on information such as market announcements, stock price changes, and other direct criteria that changes throughout the trading day. Thus, "active" investors will prefer trading systems that allow them to trade at any time that a relevant announcement or other event with market significance takes place. *See, e.g., 1993 House Hearings, supra* note 9, at 463 (prepared statement of Michael O. Sanderson, President, Instinet Corp.); TIAA-CREF Letter, *supra* note 22, at 3; CALPERS Letter, *supra* note 22, at 1.

107. Cantor Fitzgerald deals only in Limited Partnership interests. Cantor Fitzgerald clears all orders before they are entered into the system to ensure that they have the necessary documentation. MARKET 2000, *supra* note 5, app. IV, at AIV-5.

108. CrossCom is used only for trading debt securities. *Id.* at AIV-6.

109. Delta offers trading only in options on U.S. Treasury bills, notes, and bonds. It is a joint venture between Delta, a registered clearing agency, RMJ Options Trading Corporation, a registered government securities broker, and Security Pacific National Trust Company. *Id.* at AIV-7.

110. *See* Instinet No-Action Letter, *supra* note 101, at 78,920. CS First Boston's Lattice Network, rather than forcing all trades through its affiliated broker-dealer allows customers to route orders to their choice of several different brokers for execution. MARKET 2000, *supra* note 5, app. IV, at AIV-4.

111. Instinet, for example, is a member of several regional exchanges. *Id.* at AIV-3. Lattice executes some of its trades through electronic links to the exchanges through the NYSE's DOT system and the BSE's BEACON. *Id.* at AIV-5. Until recently, Instinet terminals were located at all specialist posts on the floor of the NYSE, where specialists could use them to enhance their ability to work orders. The NYSE has recently completely replaced the computer hardware on the specialists posts and, in the process, has eliminated the Instinet terminals.

112. All of these systems carefully choose their customers based on sophistication and creditworthiness. *Id.* at AIV-2 to AIV-7; Instinet No-Action Letter, *supra* note 101, at 78,931-32; Delta Release, *supra* note 101, at 1891. Participation is often limited to broker-dealers, banking institutions, or other professional financial intermediaries. Instinet No-Action Letter, *supra* note 101, at 78,925. This limitation has been the subject of both an argument against greater regulatory scrutiny and has also been criticized by representatives of smaller investors who have been denied access to the advantages of these systems. *See, e.g.,* Order Execution Obligations, *supra* note 8, at 52,792-93 (discussing problem of lack of access for retail investors).

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to enter a corresponding contra order.¹¹³ Institutions entering orders have the option of having them displayed only to other institutional investors, thus prohibiting broker-dealers from seeing their trading interest. This is known as the "I-only" option. This feature allows institutions to keep the information communicated by their trading interest from the broker-dealers.¹¹⁴ Orders matched with a contra side order are either executed automatically or by an intermediary through one of several methods, including telephone confirmation or automatic keystroke.¹¹⁵ In some cases, matched orders are executed by the affiliated broker-dealer automatically, without any subsequent activity on the part of either buyer or seller.¹¹⁶

Unlike the hit and take systems, matching systems are "passive" pricing systems, which match orders based on the prices in the primary market for the security. The matches take place at certain pre-designated times. Customers enter bids up until a few minutes before the match time, at which point all matched orders are executed¹¹⁷ at a price derived from the primary market price.¹¹⁸ Orders not executed at the matching session are cancelled or, at the option of the customer, can be routed to the primary exchange for market execution.¹¹⁹ These systems offer lower commissions in exchange for the loss of immediacy found in a continuous trading environment. They appeal to managers who are making investment decisions based on indexing, and who are seeking anonymous trading and lower transaction costs. Like the hit and take systems, these systems are owned and operated by registered broker-dealers who are responsible for regulatory compliance. The most popular of these systems is the Portfolio System for Institutional Trading (POSIT), which operates during the normal trading day and allows investors to trade both

113. Customers using the Lattice Network not only can route orders to be matched against orders in the Lattice system but can also choose to route orders to a participating exchange for market execution. They may also instruct the system to find the "best" execution whether it be in the network or on an exchange. Orders that do not find matches can be left with either Lattice or an exchange. MARKET 2000, *supra* note 5, app. IV, at AIV-4.

114. For a description of Instinet's "I-only" function, *see id.* at AIV-3. In contrast, broker-dealers do have access to information regarding trading interest in the NYSE's "upstairs" market and, despite NYSE rules prohibiting the practice, have frequently been accused of "front-running," whereby floor brokers associated with upstairs trading desks are informed of impending trades and are able to enter into floor trades prior to the display of the upstairs cross. *See, e.g.,* David M. Bovi, *Rule 10b-5 Liability for Front-Running: Adding a New Dimension to the "Money Game"*, 7 ST. THOMAS L. REV. 102, 103 (1994); 1993 House Hearings, *supra* note 9, at 488 (prepared statement of Raymond L. Killian, Jr., President, ITG, Inc.).

115. MARKET 2000, *supra* note 5, app. IV, at AIV-2. "Indications of interest" are not firm bids/asks, but instead are firm only as to price or size. An example is Instinet's "Negotiation Service," where the indications of interest are used as the starting point for a negotiation that takes place anonymously through the system and can be limited with an "I-only" designation. *Id.* at AIV-3.

116. For example, Instinet's "Trading Service," which offers automatic execution. *Id.*

117. In the POSIT system, a POSIT employee looks at all matched orders and decides whether to execute it automatically or, in the event that the match is not perfect, contact the parties for modifications. *Id.* at AIV-8.

118. POSIT executes orders at the midpoint between the best bid/ask on the primary market on the day of the trade. *Id.*

119. *Id.* at AIV-8.

complete portfolios and single issues of stock.¹²⁰ Other matching systems also operate in after-hours trading, such as POSIT's pre-opening Volume Weighted Average Price session and Instinet's Market Match.¹²¹

Auction systems can be either "single-price" (where the system determines an equilibrium price based on supply and demand) or "one-sided" (where the system mathematically determines the highest price for a security in the system and executes between highest bidder and seller). The largest and most successful of these systems is the Arizona Stock Exchange (AZX),¹²² which is a "single price," non-continuous auction system.¹²³ AZX participation is limited to broker-dealers and institutional investors. Users are connected through computer linkages to AZX's main computer, which runs an auction once a day at 5:00 p.m. (EST) after the close of the NYSE and NASDAQ. Participants enter limit orders throughout the day until a pre-established deadline a few seconds before the daily auction. The computer then reviews all orders in the system to determine the equilibrium price, which is the price where the volume of buy orders most nearly equals the volume of sell orders (the Auction Price).¹²⁴ All orders exceeding the equilibrium price are then automatically executed at the Auction Price. All orders equal to the Auction Price are filled on the basis of time priority.¹²⁵

120. POSIT is a trading system that is owned and operated by Investment Technology Group, Inc. (ITGI), a NASDAQ listed subsidiary of Jefferies & Company. In May, 1994, ITG and Jefferies transferred the POSIT business to Investment Technology Group, Inc., which then went public with an initial public offering of 3.7 million shares of common stock. Jefferies immediately became the controlling shareholder of ITG, with over an 80% ownership interest as of December, 1994. INVESTMENT TECHNOLOGY GROUP, INC., 1994 ANNUAL REPORT TO SHAREHOLDERS 24 (1995) [hereinafter ITGI ANNUAL REPORT]. In addition to POSIT, ITGI offers QuantEX, which is a portfolio management program that helps institutions maximize portfolio returns. QuantEX offers routing services, which allow users to send trades to POSIT, the NYSE, a regional exchange, or an OTC market maker. ITGI derives almost all of its revenue from POSIT and QuantEX. INVESTMENT TECHNOLOGY GROUP, INC., FORM 10-K FOR FISCAL YEAR ENDED DECEMBER 31, 1995 at 3 (Mar. 27, 1995) [hereinafter ITGI FORM 10-K].

121. POSIT's Volume Weighted Average Pricing System bases prices on the total volume in the primary market (for exchange-listed securities) or total NASDAQ volume (for NASDAQ/NMS securities). MARKET 2000, *supra* note 5, app. IV, at AIV-9 to AIV-10. Instinet's Market Match uses the total consolidated tape volume for listed securities, a pricing option also available to POSIT users. *Id.* at AIV-9 to AIV-10.

122. AZX was originally located in Minnesota and known as the "Wunsch Auction Systems," under which it received its no-action approval. It moved to Arizona after receiving a \$2 million investment from the state in 1992. *Arizona Exchange Unveiled This Week*, SECURITIES WEEK, Mar. 23, 1992, at 10.

123. The other of these systems is the National Partnership Exchange (NAPEX) which is a one-sided auction which facilitates trading only in limited partnerships.

124. MARKET 2000, *supra* note 5, app. IV, at AIV-10 to AIV-11. AZX's founder, Steven Wunsch, has repeatedly emphasized that AZX is not a "passive" pricing system, but rather discovers its own prices. Nonetheless, in practice, 90% of AZX trades are executed at NYSE prices. Burr, *supra* note 75, at 25.

125. Throughout the day, the computer constantly determines the equilibrium price of the orders currently in the system and displays it to users, who can then adjust their orders to increase their chances of execution. Since its original inception in 1991, the AZX has added a "Match Book" which allows customers with prematched orders that do not meet the "Auction Price" to route orders to BT Brokerage for execution. The no-action letter noted that any volume routed to BT Brokerage in this manner must be included in the total volume for determining AZX's continuing volume exemption.

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Since their original entry into securities trading, the PTSs have begun to expand internationally, include new investment products, and consolidate the strengths of different systems. Instinet is particularly popular because of its links to international markets and its affiliation with foreign broker-dealers who are members of the London, Frankfurt, Paris, and Toronto Stock Exchanges.¹²⁶ This popularity has led other PTSs to seek international ventures.¹²⁷ Links between the various PTSs allow the consolidation of orders and makes the systems more attractive by increasing liquidity and decreasing costs for users. AZX and POSIT, for example, have recently announced an alliance whereby POSIT customers will have the option of routing unmatched orders to AZX to be included in its 5:00 p.m. call auction session.¹²⁸

B. PTSs and Fragmentation¹²⁹

The development of a wide variety of markets, slowly pulling volume away from the centralized NYSE, is referred to as "market fragmentation." As

Wunsch Release, *supra* note 101.

126. In addition, it can effect trades in numerous foreign issues. As with the NYSE, Instinet has terminals located on foreign exchange floors; however, pursuant to U.S. law, trading directly between foreign and U.S. investors is limited. MARKET 2000, *supra* note 5, app. IV, at AIV-3.

127. AZX's founder, Steven Wunsch, has recently made overtures in international markets and may be looking to establish international links. Karen Corcella, *Packing Proprietary Systems for Overseas*, WALL ST. & TECH., Apr. 1, 1994, at 14. POSIT has also begun searching for expansion opportunities in the global market. ITGI ANNUAL REPORT, *supra* note 120, at 7.

128. Press Release from the Investment Technology Group, Inc., *Investment Technology Group, Inc. Announces New Technology Alliance and Clearing Agreement with AZX, Inc.* (Feb. 9, 1995) [hereinafter ITGI Press Release]. Under the terms of the alliance, ITG will also become the executing broker for all matches done in AZX. This arrangement will reduce the impact of one of POSIT's drawbacks, which is that execution is not guaranteed and thus participants bear the market risk of allowing orders to sit in POSIT's system for a day. An order entered in POSIT cannot simultaneously be worked on the exchange floor or sent to a NASDAQ broker. Thus, participants choosing to place the order in the POSIT system, rather than sending it to their floor broker, run the risk that their order will not be executed in POSIT and that the floor price will move in an adverse direction during the day. When the customer is finally able to retrieve the order from POSIT and send it to the floor, it will be executed at the inferior price. In addition, customers will only have to pay one commission fee for the use of both systems, increasing incentives to use the POSIT/AZX system.

129. The term "fragmentation" is used to refer to several different phenomena. "Market fragmentation" usually refers to the splintering of markets that are physically separated. Fragmentation, however, can also occur over time. In a continuous market, demand and supply are not consolidated at a single point in time and thus may be "fragmented." A call auction, like the AZX, brings together supply and demand at a certain time, thus eliminating this temporal fragmentation. As one commentator has noted, call markets are "particularly suitable for computerization When computer technology has been applied to the continuous market, on the other hand, it has served largely to accelerate the pace with which orders are submitted to the market and translated into trades. Under stressful conditions, this acceleration may be destabilizing." Schwartz, *supra* note 21, at 390-91. Like physical fragmentation, temporal fragmentation has the potential for both good and harmful effects on the functioning of markets. The most frequently cited problem with temporal fragmentation is its contribution to the intra-day price volatility present in the continuous auction markets such as the NYSE. See, e.g., Peake & Mendelson, *supra* note 3, at 18. These commentators note, however, that temporal fragmentation facilitates capital flow to volatile industries whose investors demand intra-day liquidity. In addition to "spatial" and "temporal" fragmentation, Peake and Mendelson have identified a third source of "fragmentation," which they call "internal" fragmentation. This occurs when bids and offers within the same market cannot trade with each other, such as when previously matched orders are not exposed to the limit book or market floor. *Id.* at 16-17.

discussed above, several potential problems, including decreased liquidity, less accurate price discovery, less effective best execution monitoring, and diminished transparency, may result from market fragmentation. Critics of PTSs, particularly the established exchanges, have repeatedly argued that PTSs heighten market fragmentation and threaten further impact as their market share grows.

PTSs may also contribute to the separation of the institutional and individual investor markets, which could have several negative results, including greater distrust of the markets among individual investors and increased risk for market makers and specialists, which leads to higher spreads and, possibly, decreased liquidity. Individual rather than institutional investors may also bear the burden of the fragmentation problems listed above, because their lack of market power and information disadvantages them in a less transparent trading environment which is more difficult to monitor.

There are also benefits, however, from the development of different markets, such as enhanced customer service and lower commissions.¹³⁰ New markets will fail unless they offer either better prices or better service.¹³¹ If successful, they put pressure on the existing markets to adapt to meet the demands of the investing public for new services or lower prices. Competing markets also enable investors to choose a package with trade-offs that may be unacceptable to other investors. For instance, many of the PTSs, unlike the NYSE, do not provide the investor with the ability to trade immediately on new information. Thus, investors who place a premium on immediacy, such as arbitrageurs, should be willing to pay the extra costs of running a continuous market.¹³² In contrast, institutional investors with more "passive" investment strategies can avoid subsidizing the immediacy needs of the arbitrageurs by moving some of their order flow to PTSs where they can pay lower commission fees and avoid the market risk costs associated with exposing block positions to the open market.¹³³

Market fragmentation may actually increase liquidity because it provides investors with more points of access to the market, encouraging greater participation. In addition, market fragmentation may also enhance liquidity by

130. MARKET 2000, *supra* note 5, Study III, at III-1.

131. Hans R. Stoll, *Organization of the Stock Market: Competition or Fragmentation?*, in MODERNIZING U.S. SECURITIES REGULATION: ECONOMIC AND LEGAL PERSPECTIVES 399 (Kenneth Lehn & Robert M. Kamphuis, Jr. eds., 1992).

132. The commissions charged by NYSE members or the bid-ask spreads earned by market-makers in the NASDAQ market are the price of this access to continuous trading. In addition, the provision of immediacy contributes to the temporal (rather than the physical) fragmentation of markets, creating another "cost" of the service. Schwartz, *supra* note 21, at 389-90.

133. A similar trade-off is made for sophisticated investors, who may be more willing to bear the risks of trading in a less regulated market where they gain the advantage of lower transaction costs but lose protection from fraudulent practices. Their superior knowledge and greater market power make them more comfortable with this practice than the individual investors who rely on the "insurance" provided by the regulatory authorities. Nowak, *supra* note 89, at 514.

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attracting market makers who are more willing to put capital at risk in a trading environment where they can earn a larger spread, as well as by discouraging institutional investors from leaving the structured market altogether, for example, to the fourth market. Finally, the idea underlying the NMS legislation and the development of the ITS was that the different markets could be linked, thus eliminating any fragmentation problems represented by the spatial separation of the markets, by routing orders over the computer links to the market offering the best price.¹³⁴ Critics of PTSs have argued that they undermine NMS goals by encouraging the diversion of order flow from the primary markets through new market centers that are not completely transparent.¹³⁵

Eliminating the price differential, however, can be performed by arbitrageurs without the physical linkage between the markets. Any price differential between markets will be eliminated by the arbitrageurs, who will purchase and sell in the unequal markets until the price equalizes between them. As long as the markets are completely transparent and the arbitrageurs are allowed to freely operate, the arbitrage activity will be able essentially to link the markets, and different market centers can exist without hampering either liquidity or price discovery.¹³⁶ While this method of market linkage does bear the "cost" of the premium earned by the arbitrageurs, physical linkage through the ITS is also an expensive proposition.

The PTSs argue that instead of fragmenting the market, they actually help centralize it by facilitating this non-physical market linkage. By computerizing the display of quotes in various markets and providing users with rapid keystroke routing to various market centers, they increase the arbitrageurs' abilities both to see prices in other markets and to execute trades quickly in the market with the variant price.¹³⁷

134. MARKET 2000, *supra* note 5, app. II, at II-4.

135. *Id.*, app. VI, at AVI-35 to AVI-37 (summarizing various comments concerning PTSs' potential impact on fragmentation).

136. See, e.g., Letter from Frank E. Baxter, Chairman, President & CEO, Jefferies & Co., Inc. and Raymond L. Killian, Jr., President, Investment Technology Group, Inc. to Jonathan G. Katz, Secretary, SEC 23 (Oct. 8, 1992) (available in the SEC Public Reference Room, File No. S7-18-92) [hereinafter POSIT Comment Letter] (noting that fragmentation is only a problem if there is limited or no arbitrage activity); MARKET 2000, *supra* note 5, app. VI, at AVI-33 (summarizing comments regarding PTSs and fragmentation); Harris, *supra* note 81, at 17-18 (discussing role of arbitrageurs in linking markets). Fragmented markets that are "linked" through transparency are sometimes referred to as "segmented" markets which, proponents argue, allow traders with different trading needs to choose the package that suits them while still maintaining the integrity and liquidity of the markets. *Id.* at 16.

137. See, e.g., 1993 House Hearings, *supra* note 9, at 469-70 (prepared statement of Michael O. Sanderson, President, Instinet Corp.); POSIT Comment Letter, *supra* note 136, at 20-21. For instance, the Instinet system provides users with screens that simultaneously display quotes in a variety of market centers on one side of the screen and displays the Instinet order book on the other side of the screen. Instinet No-Action Letter, *supra* note 101, at 78,920-21. Thus, Instinet users essentially fill the arbitrageurs' role in equalizing the markets. Similarly, POSIT's new QuanTEX system displays quotes in several markets, including both traditional markets and PTSs, and allows orders to be routed among them. PTSs do, however, also decrease pre-trade transparency because they allow some orders to be hidden from interested contra-parties. This latter problem seems to be one of the SEC's concerns that

C. PTSs and SRO Competition

Market fragmentation, by allowing markets to exist separately, also allows them to be regulated separately. The existing exchanges and the NASD have been vocal participants in the PTS debate, contending that PTSs can focus on competitive efforts to divert flow from the exchanges because they are free from the regulatory burdens and responsibilities facing the SROs. The exchanges argue that PTSs "free ride" off their provision of certain necessary services, which include mechanisms for price discovery and the general insurance of the integrity of the trading markets.

In the current structure, price discovery happens primarily on the floor of the NYSE which, in conjunction with the CTA, generates the acknowledged market price for all listed securities. The NYSE often refers to the importance of accurate pricing as generated on the floor of the NYSE.¹³⁸ The NYSE, and the other exchanges that must report to the Tape, bear the costs of running this system.¹³⁹ Many of the PTSs or other off-exchange trading environments are "passive" pricing systems, which either price directly off the NYSE,¹⁴⁰ or use NYSE prices as the starting point for negotiations.¹⁴¹ The PTSs benefit from this information but do not have to pay for it, either directly, or indirectly through the regulatory costs imposed on the NYSE.¹⁴² PTSs also pull order flow away from the NYSE, and in the process, perpetuate inaccurate price discovery by reducing flow through the market that is providing the price discovery.¹⁴³

In addition to providing price discovery, the NYSE and the other exchanges also argue that the regulatory burdens they bear assist all market participants by reassuring the investing public about the integrity of the markets.¹⁴⁴ The NYSE acts as the "market of last resort" in times of crisis; investors turn to the NYSE to continue providing liquidity, and the NYSE rules, which force floor specialists to cover supply and demand gaps, particularly during crises,

is motivating recent rule proposals. Order Execution Obligations, *supra* note 8, at 52,792-93.

138. 1993 House Hearings, *supra* note 9, at 3 (prepared statement of William H. Donaldson, Chairman, NYSE).

139. NASD market-makers are required to report trades to the Tape within 90 seconds. A recent study, however, questions whether the market-makers are diligent in actually reporting to the Tape within the specified time period. Warren Getler, *NASDAQ Dealers Often Violate Rules On Speedy Reporting, Study Suggests*, WALL ST. J., Jan. 13, 1995, at A10 (discussing unpublished study by Weaver and Porter indicating that NASDAQ market-makers are violating "90-second rule," which may distort accuracy of public pricing).

140. For instance, Instinet's Crossing Session and Market Match generate prices directly from NYSE closing prices and volume. MARKET 2000, *supra* note 5, Study II, at II-8.

141. *Id.* For instance, the NYSE "upstairs" market; see also *id.*, Study III, at III-2 (discussing price discovery on primary exchange).

142. MARKET 2000, *supra* note 5, app. VI, at AVI-36 (summarizing NYSE comments).

143. 1993 House Hearings, *supra* note 9, at 339 (testimony of Richard A. Grasso, President, NYSE) (discussing impact of order diversion on pricing mechanism).

144. *Id.*, Study III, at III-3.

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are of crucial importance to the continuing viability of the markets.¹⁴⁵ The NYSE and the other exchanges, perhaps acting in their role as competitors rather than regulators, have used these arguments to advocate increased regulatory burdens on the PTSs, or in the alternative, decreased burdens for themselves.¹⁴⁶

While the SEC has been sympathetic to some of these arguments,¹⁴⁷ it has also pointed out that the NYSE is able to charge fees for access to the Consolidated Tape information, for example, and membership dues that allow it to recoup some costs.¹⁴⁸ The NYSE's continued ability to remain profitable may indicate that it is not suffering dramatically from this problem.¹⁴⁹ The role of the traditional exchanges and NASDAQ in this debate highlights the tension between the SROs' dual role as regulator and competitor. The proliferation of PTSs has illuminated this tension in a unique way. All PTSs are owned and operated by broker-dealers who are subject to the oversight of the NASD; the NASD is both the regulator of the PTSs and one of its fiercest competitors. In undertaking both roles, the NASD might be tempted to thwart the growth of PTSs through regulatory action.¹⁵⁰

III. THE REGULATION OF PROPRIETARY TRADING SYSTEMS

The basic regulatory regime for the primary, regional, and NASDAQ markets was determined by the 1934 Act, with some changes wrought by the 1975 Amendments. As noted above, the SEC has focused its approach to regulation primarily on the prevention of fraud, with less attention given to regulation aimed at developing market structure, an approach that has left the

145. During the most critical periods of the 1987 crash, the NASD experienced even greater difficulties than the NYSE (which was assisted by its specialists) and was unable to continue operating, as the market-makers that create the system stopped answering their phones or executing trades. 1987 MARKET BREAK REPORT, *supra* note 78, at 9-19. The PTSs have argued that the floor specialists are a band-aid for the imperfect market flow that has been created by overregulation and the monopolistic rules imposed by the NYSE. Instinet No-Action Letter, *supra* note 101, at 78,935-36.

146. See, e.g., 1993 House Hearings, *supra* note 9, at 435 (prepared testimony of Edward A. Kwalwasser, Executive Vice President, NYSE).

147. The new reporting requirements imposed on the PTSs, as discussed in more detail below, are an effort on the part of the SEC to address some of these concerns.

148. MARKET 2000, *supra* note 5, Study III, at III-3.

149. *Id.* While the NYSE's current health is not in jeopardy, its long-term future may be a bigger concern. See, e.g., Roger Lowenstein and Craig Torres, *Big Board Stocks May Be Rising, But Exchange Seat Prices Languish*, WALL ST. J., June 21, 1990, at C1 (noting that price for seat on the exchange had dropped from \$1.15 million in 1987 to \$430,000 in 1990 and attributing drop to emergence of PTSs).

150. For instance, NASDAQ has recently introduced its new Aqcess trading system. See Taylor and Getler, *supra* note 41, for a discussion of the new system. Under this system, the NASD will require participating broker-dealers to provide price protection for limit orders in the system. In a possible effort to level the regulatory playing field, the NASD will also require that all PTSs provide the same price protection for limit orders. Note, however, that the NASD has supported the development of PTSs, so long as they are adequately regulated. Letter from Joseph R. Hardiman, President, NASD to Jonathan Katz, Secretary, SEC 14-15 (Nov. 20, 1992) (available in the SEC Public Reference Room, File No. S7-18-92).

PTS issue unresolved. The SEC has undertaken to regulate certain market entities both by looking to prevent the fraudulent potential that is unique to each market participant and by considering the role they play in the system, rather than their nominal character, an approach that has been termed "functional regulation."¹⁵¹

The development of PTSs has presented the SEC with the challenge of determining the appropriate regulatory regime. The SEC essentially has two ways it can apply "functional regulation." It can either incorporate PTSs into the current regulatory regime or it can create a new regulatory category based on the unique character of these systems.¹⁵² Rather than definitively choosing either of these approaches, the SEC has dabbled in both. The SEC's initial reaction to the appearance of PTSs was to create an alternative regulatory category within the 1934 Act, Rule 15c2-10.¹⁵³ When that effort proved unsuccessful,¹⁵⁴ the SEC retreated to an ad hoc approach developed through

151. The term "functional regulation" as opposed to "institutional regulation" suggests that entities that perform similar functions should be subject to similar regulation . . . firms that act solely as intermediaries between a market and a customer should be regulated as brokers; firms that hold themselves out to other professionals as willing to buy and sell securities on an order-by-order basis should be regulated as dealers; and firms that establish a market place for providing executions of transactions in securities pursuant to their own trading rules should be regulated in a manner similar to exchanges, regardless of whether they are brokers or dealers.

1993 House Hearings, *supra* note 9, at 441 (prepared statement of Edward A. Kwalwasser, Executive Vice President, NYSE).

152. The second of these options would require the SEC to create a separate regulatory structure, similar to the section 15A alternative regulatory system for non-member brokers and dealers in the 1934 Act or the "clearing agency" concept created in the 1975 Amendments. This new regulatory category for the PTSs would have to be specifically tailored to their role in the marketplace. Even more radically, Congress could create a new statutory regime for PTSs, as it did in 1940 with the Investment Company Act of 1940.

153. The SEC has twice proposed a new Rule 15c2-10 which would have, at least in a weak form, created a new regulatory category for these systems. See Proposed Rule 15c2-10, Exchange Act Release No. 8,661 [1969-1970 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 77,735 (Aug. 4, 1969) and Proprietary Trading Systems, Exchange Act Release No. 26,708 [1989 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 84,406 (Apr. 11, 1989) (re-proposing Rule 15c2-10). In 1969, the SEC noted that "the technology that has led to the development of automated trading information systems was not envisioned when Congress passed the [1934] Act. Consequently, the applicability or adaptability of the existing statutory classifications to them is not entirely clear." Proposed Rule 15c2-10 at 83,682. Thus, the SEC proposed Rule 15c2-10 which, "would provide a regulatory framework for systems not within the existing scope of regulation of exchanges and national securities associations." *Id.* at 83,683. The new rule specifically defined the "automated trading information systems" as "any automated system for transmitting, among participants, subscribers, or customers, indications of interest to purchase or sell securities or offers to purchase or sell securities through the use of a computer or similar device, but does not include any such system sponsored, operated, and regulated by a registered national securities exchange or a registered national securities association." *Id.* The new rule would have required PTSs to file a proposed plan with the SEC, which the SEC would then review to ensure that it provided sufficient measures for preventing fraud and for maintaining the necessary records. Proposed Rule 15c2-10 was eventually withdrawn in 1975 in the same release that adopted Rule 11Ab2-1 regarding the registration of "securities information processors." The SEC simply stated without further explanation or discussion that the rule was no longer necessary "in view of the regulatory scheme provided by the 1975 Amendments." Notice of Adoption of Rule 11Ab2-1 and Notice of Withdrawal of Proposed Rule 15c2-10, *supra* note 56, at 85,687.

154. See Notice of Adoption of Rule 11Ab2-1 and Withdrawal of Proposed Rule 15c2-10, *supra* note 56; Proprietary Trading Systems, Exchange Act Release No. 33,621 [1992-1993 Transfer Binder]

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a series of no-action letters and recently formalized with the adoption of new Rule 17a-23 in December 1994.¹⁵⁵ The SEC has ultimately chosen not to create a new structure, but rather to compare the PTSs to existing entities, such as “exchanges” or “broker-dealers.”¹⁵⁶

A. Regulation Through Existing Structures

The SEC, through its no-action letters, has attempted to regulate PTSs within the current framework. The SEC has implemented this approach by either determining that the PTSs are “brokers” and/or “dealers,” and thus subject to regulation by the SEC and the NASD, or by granting the PTSs a “limited volume” exception to exchange registration. By adopting this approach, the SEC, which seems to be driven by both policy and statutory concerns, has avoided determining whether the new systems are “exchanges,” which would require them to operate as a new SRO with regulatory responsibilities and SEC oversight.

1. Regulation as Exchanges

Prior to 1969, the SEC had little reason to provide interpretation of the Act’s definition of “exchange,” which had not been a particularly challenged provision of the statute. Some critics have argued that the SEC’s failure to address directly this issue in the early days has led to confusion and controversy over its application ever since.¹⁵⁷ Section 3(a)(1) defines an “exchange” as:

any organization, association, or group of persons, whether incorporated or unincorporated, which constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange as that term is generally understood, and includes the market place and the market facilities maintained by such exchange.¹⁵⁸

If an entity is determined to be an “exchange,” as defined by section 3(a)(1), it must register as a “national securities exchange” under section 6, which will

Fed. Sec. L. Rep. (CCH) ¶ 85,322 (Feb. 14, 1994) (withdrawing Proposed Rule 15c2-10 in light of the new Proposed Rule 17a-13 imposing additional record keeping and reporting requirements on PTSs).

155. Recordkeeping and Reporting Requirements for Trading Systems Operated by Brokers and Dealers, Exchange Act Release No. 35,124, 59 Fed. Reg. 66,702 (Dec. 28, 1994) [hereinafter Rule 17a-23 Adoption Release].

156. Systems such as Instinet, POSIT, have generally requested a no-action position with respect to their non-registration as “exchanges” under section 6 of the Act, as “associations” under section 15A of the Act, or as a “clearing agency” as defined in section 3(a)(23) of the Act. One system, AZX (“Wunsch system”), was given a “limited volume exchange” exemption under section 5 of the Act. Wunsch Release, *supra* note 101.

157. Therese H. Maynard, *What is an “Exchange?”—Proprietary Electronic Securities Trading Systems and the Statutory Definition of an Exchange*, 49 WASH. & LEE L. REV. 833 (1992).

158. 15 U.S.C. §78c(a)(1) (1995).

subject it to the variety of rules and regulations outlined in that section.¹⁵⁹ Because these rules are extensive and costly, the new systems have taken pains to convince the SEC that they do not fall within the definition.

The controversy regarding the definition of exchange stems primarily from its facial breadth. As one PTS has noted, the definition is "so broad that, when read literally, it would appear to embrace . . . not only the traditionally recognized stock exchanges, but also traditional brokers such as the major wire houses, market makers, block positioners and third-market makers [who] have offices (places of business) where they make markets and/or cross orders to the maximum extent possible (i.e. bring together purchasers and sellers)."¹⁶⁰ Assuming that Congress could not have meant the definition to extend this far, interpreters are faced with the problem of finding a limiting principle which will allow the SEC to apply the law as it was intended and yet retain its broad reach.

The SEC itself remained notably reticent as to its interpretation of section 3(a)(1) until 1990 when the Seventh Circuit, reviewing the SEC's decision to grant a no-action position to the non-registration of the Delta Government Options trading system, specifically requested that the SEC articulate its definition of "exchange."¹⁶¹ In response to this request, the SEC issued a release in which it determined that, in deciding whether or not a particular system is an exchange:

the central focus of the Commission's inquiry should be whether the system is designed, whether through trading rules, operational procedures or business incentives, to centralize trading and provide buy and sell quotations on a regular or continuous basis so that purchasers and sellers have a reasonable expectation that they can regularly execute their orders at those price quotations.¹⁶²

The SEC undertook a fairly lengthy discussion of this standard and the factors that would be considered in applying it, including the presence of a trading "floor," limit order protection, the use of specialists with affirmative trading

159. Under subsection (a), exchanges must apply for and receive approval from the Commission prior to commencing operations. The SEC will only give approval after verifying that the exchange complies with the numerous provisions of subsection (b), including reporting and compliance procedures, rules for administration and trading, and procedures for disciplinary action against members who fail to comply with the federal securities laws or the rules of the exchange. Once registered, an exchange must comply with the membership requirements of subsection (c) and the applicable reporting requirements and other responsibilities of sections 17 and 19.

160. Instinet No-Action Letter, *supra* note 101, at 78,930.

161. Board of Trade of the City of Chicago v. SEC, 883 F.2d 525, 536-37 (7th Cir. 1989). This litigation arose when the Board of Trade of the City of Chicago and the Chicago Mercantile Exchange, both futures exchanges, challenged the non-registration of the Delta System as an "exchange." The Delta System, which was to facilitate trading of put and call options on government securities, threatened the plaintiffs, who feared they would lose the hedge driven order flow from their markets. Interestingly, the court concluded that these exchanges had standing to challenge the SEC's determination because the federal securities laws could be interpreted to protect both investors and markets and the futures markets had adequately proven that they could be injured sufficiently to claim standing. *Id.* at 529-34.

162. Delta Release, *supra* note 101, at 1900.

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obligations, guaranteed execution, the standardization of instruments traded in the system, and the participation of retail investors.¹⁶³ The SEC concluded that Delta was not an “exchange” as that term was commonly understood.¹⁶⁴ The SEC initially considered issues such as Delta’s ability to establish admissions criteria, impose rules on participants, and discipline participants but later dismissed them by noting that “securities clearing agencies” have the power to undertake many of these same activities, yet were clearly exempt from the congressional interpretation of “exchange.”¹⁶⁵ More interestingly, the SEC acknowledged the pragmatic policy problems that would result from attempting to regulate Delta as an exchange, specifically, the regulatory costs that might drive such a system out of business.¹⁶⁶

In articulating the definition of “exchange,” the SEC and the Seventh Circuit left a substantial amount undetermined. In the closing paragraph of its discussion regarding the “exchange” definition, the SEC noted that “it is certainly possible that [such] a system . . . might attract a level of buying and selling interest to develop into a continuous or regular auction market.”¹⁶⁷ The SEC went on to state that, “if an existing market developed a stock trading system and accompanied it with trading rules, procedures or business incentives that resulted or appeared likely to result in a continuous or regular centralized securities market, that system would be required to register as an exchange.”¹⁶⁸ This language leaves open the possibility that exchange registration might be necessary as these systems grow. More fundamentally, this language seems to indicate that the systems do possess most of the essential characteristics of an “exchange,” but do not currently meet the definition because of their size. The Seventh Circuit added its own gloss on the problem by noting that:

What is true is that the Delta system differs only in degree and detail from an exchange. Its trading floor is a computer’s memory. Its structure is designed to encourage liquidity, though not to the same extent as the structure of an exchange

163. The SEC ultimately determined that Delta did not meet this criteria and was, therefore, not an “exchange” required to register under the Act. Note that the SEC’s list of criteria seems to suffer from the same problem as the PTSs no-action letter arguments discussed below. Some of the criteria are not definitional, but rather are related to the propriety of a proposed exchange’s operation plan, as filed with the SEC for pre-approval under section 6(b).

164. The SEC’s conclusion with regard to Delta’s status was upheld by the Seventh Circuit, which noted that the SEC’s decision not to litigate was one completely within agency discretion. *Board of Trade of the City of Chicago v. SEC*, 923 F.2d 1270 (7th Cir. 1991). At least one commentator has criticized this deference to the SEC’s interpretation of a statute when it conflicts with the “literal language” of the statute. Maynard, *supra* note 157, at 839.

165. Delta Release, *supra* note 101, at 1891.

166. Delta Release, *supra* note 101, at 1899-900. For instance, it is unclear that institutions could continue to participate directly in systems that are defined as “exchanges.” In adopting the position, the SEC did not specifically respond to the futures exchanges’ argument that requiring registration would not restrict direct participation by institutional investors.

167. *Id.* at 1900.

168. *Id.* at 1900 n.100.

is. Section 3(a)(1) is broadly worded. No doubt (considering the time when and circumstances in which it was enacted) this was to give the Securities and Exchange Commission maximum control over the securities industry. So the Commission could have interpreted the section to embrace the Delta system. . . . But we do not think it was compelled to do so.¹⁶⁹

The PTSs, obviously wishing to construe this definition as narrowly as possible, have emphasized the congressional reference to "a stock exchange as that term is generally understood."¹⁷⁰ They argue that Congress meant to encompass within the definition only exchanges that are substantially similar to the ones that were in existence in 1934, like the NYSE. This definition requires trading floors, administrative procedures, and defined memberships.¹⁷¹ Instinet buttresses this interpretation by noting that the definition of "facility"¹⁷² and the definition of "member"¹⁷³ both seem to envision an "exchange" possessing characteristics similar to that of the NYSE and the other physically located exchanges. Instinet further notes that if the SEC were to adopt such a broad meaning of "exchange," it would incorporate the over-the-counter market, and thus would make the aspect of the 1934 Act aimed specifically at the separate regulation of the OTC market superfluous.¹⁷⁴ Finally, PTSs argue that they are *businesses*, not *regulators*, and thus should not be classified as "exchanges," the function of which is "primarily regulatory in nature. Exchanges and associations may (and in today's world do) provide

169. *Board of Trade*, 923 F.2d at 1273.

170. POSIT No-Action Letter, *supra* note 101, at 77,658; Instinet No-Action Letter, *supra* note 101, at 78,931.

171. Instinet No-Action Letter, *supra* note 101, at 78,931. Another PTS has articulated four "basic qualities" which define an exchange:

- a. The presence of members who have a proprietary interest in, and control over, the exchange;
- b. A system of self-regulation of members of an exchange;
- c. The exercise of control by the exchange over the selection of securities traded within the exchange; and
- d. The furnishing of physical facilities for the auction trading of securities (typically, a stock exchange "floor" on which members can communicate in person and conduct a securities business).

POSIT No-Action Letter, *supra* note 101, at 77,658.

172. A "facility" is the exchange's "premises, tangible or intangible property whether on the premises or not, any right to the use of such premises or property or any service thereof for the purpose of effecting or reporting a transaction on an exchange (including, among other things, any system of communication to or from the exchange, by ticket or otherwise, maintained by or with the consent of the exchange), and any right of the exchange to the use of any property or service." Securities Exchange Act of 1934, 15 U.S.C. § 3(a)(2) (1995).

173. A "member" for purposes of an "exchange" means,

- (i) any natural person permitted to effect transactions on the floor of the exchange without the services of another person acting as broker, (ii) any registered broker or dealer with which such a natural person is associated, (iii) any registered broker or dealer permitted to designate as a representative such a natural person, and (iv) any other registered broker or dealer which agrees to be regulated by such exchange and with respect to which the exchange undertakes to enforce compliance with the provisions of this title the rules and regulations thereunder, and its own rules.

Securities Exchange Act of 1934, 15 U.S.C. § 3(a)(3)(A) (1995).

174. Instinet No-Action Letter, *supra* note 101, at 78,997.

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services and other facilities for members, but that operational role is secondary to their essential purpose as regulators.”¹⁷⁵

After defining “exchange” by reference to the “traditional” markets, the PTSs point out that they do not fall under this definition. First, they claim that they have “customers” and not “members,” noting that customers have no power to vote or to exercise control over the access of others to the system, as do exchange members.¹⁷⁶ Second, they point out that they do not have trading floors where brokers can meet with each other and with the floor specialist to complete trades.¹⁷⁷ Third, they argue that they do not have disciplinary rules and procedures as do the existing SROs.¹⁷⁸ Fourth, they note that they do not use the specialist system which grants one individual a monopoly over the floor market for a particular issue, but instead accept “all comers” interested in completing transactions through the system.¹⁷⁹ They argue that such an open playing field, in contrast to a monopoly, inherently needs less regulation.¹⁸⁰

The major weakness in the PTSs’ argument is their confusion between criteria which define them as an “exchange” under section 3(a)(1) of the Act and criteria which are necessary to make their registration plan effective under section 6 of the Act. While they may not currently have a set of administrative rules or disciplinary procedures as do the registered exchanges, this fact is not relevant to their status as “exchanges.” Similarly, the inability of their “customers” to vote on system or membership policies is also a facet of section 6 registration rather than of the section 3 definition.¹⁸¹

If PTSs fall under the section 3 definition, their “customers” could be viewed as “members” as defined by the Act.¹⁸² In fact, Instinet and POSIT’s customers are able to go to those systems’ electronic trading “floors”¹⁸³

175. *Id.* at 78,929.

176. *Id.* at 78,931; POSIT No-Action Letter, *supra* note 101, at 77,658.

177. Instinet No-Action Letter, *supra* note 101, at 78,931; POSIT No-Action Letter, *supra* note 101, at 77,658.

178. Instinet No-Action Letter, *supra* note 101, at 78,931; POSIT No-Action Letter *supra* note 101, at 77,658.

179. Instinet No-Action Letter, *supra* note 101, at 78,931.

180. *Id.* They also argue that specialists are needed on “exchanges” to remedy the market imperfections that result from the artificial trading barriers the exchanges have constructed (such as off-exchange trading restrictions and membership limitations). Thus, the PTSs argue, specialists are not needed in their systems since no such barriers to entry exist. *Id.* at 78,936.

181. See Maynard, *supra* note 157, for a more complete discussion of this interpretive problem.

182. “Members,” among other things, have the ability to “effect transactions. . . without the services of another person acting as broker,” or as a “registered broker or dealer which agrees to be regulated by such exchange.” Securities Exchange Act of 1934, § 3(a)(i-ii) (1995).

183. The PTSs have often argued that they are not exchanges because they have no physical trading floor. Instinet No-Action Letter, *supra* note 101, at 78,931; POSIT No-Action Letter, *supra* note 101, at 77,658. The PTSs’ reliance on the lack of a physical “floor,” however, seems misplaced. In one of its interpretations of the term “exchange,” the SEC explicitly acknowledged that the necessary centralized trading place “may be varied, ranging from a physical floor or trading system (where orders can be centralized and executed) to other means of intermediation (such as a formal market making system or systemic procedures such as a consolidated limit order book or regular single price auction).” Delta Release, *supra* note 101, at 1895. In 1991, the SEC granted an exemption to a single price

directly and negotiate their trades on behalf of themselves and their retail clients. PTS customers, like exchange members, typically sign extensive agreements with PTSs which articulate the rules that govern participation in the system¹⁸⁴ and give PTSs the power to terminate the agreement for any substantial violations of its terms.¹⁸⁵ Finally, rather than offering an open facility, these systems restrict their membership usually to institutional investors and market professionals and impose capital requirements for participation.¹⁸⁶

Even if a PTS is deemed an "exchange" under the Act, it can escape regulation by seeking exemption under section 5 of the Act.¹⁸⁷ Section 5 makes it illegal for any brokers, dealers, or exchanges to effect transactions on an exchange unless it is registered under section 6 of the Act, or is, "exempted from such registration . . . because, in the opinion of the Commission, by reason of the limited volume of transactions effected on such exchange, it is not practicable and not necessary or appropriate in the public interest or for the protection of investors to require such registration."¹⁸⁸ The NYSE, in its continuing battle against the non-regulation of PTSs, has challenged the scope of this exemption, arguing that Congress meant it to apply only to exchanges that were operating in 1934 but could not appropriately be regulated by the SEC because of their location or operations.¹⁸⁹ The SEC rejected this position, outlining a three prong standard for application for the "limited volume" exemption. The exchange must demonstrate (1) that it will have a

auction, the Arizona Stock Exchange. While this system was exempt from registration as a "national securities exchange" under the "limited volume" exception, the SEC did find that, as a threshold matter, the System was an "exchange" as defined in section 3(a)(1). Wunsch Release, *supra* note 101, at 8380 n.36. When originally considering these systems, the SEC did note that they had "no trading floor and do not necessarily have a number of other characteristics, such as ownership and control by members, that have historically been associated with securities exchanges." Proposed Rule 15c2-10, *supra* note 153, at 83,682. While the PTSs have repeatedly quoted this language in their no-action requests, it is important to note that this is an expression of the SEC's view in the earliest days of its consideration of these systems, an interpretation which seems to have shifted with the acceptance of AZX as an "exchange." Even in 1969, the SEC warned that "some of these systems could be viewed in certain circumstances as falling within the definition in the Securities Exchange Act of either an exchange . . . or a broker-dealer." *Id.*

184. Instinet's customers sign "Subscriber's Agreements" which Instinet differentiates from traditional brokerage agreements by characterizing them as "service" agreements, a characterization which seems closer to the definition of "exchange." Instinet No-Action Letter, *supra* note 101, at 78,922.

185. While Instinet acknowledges this "enforcement" type ability, in its 1986 letter it stated that it had exercised this authority "only once in the last three years." *Id.* at 78,931. Instinet's failure to exercise its disciplinary authority, whether because its members have behaved, or because it has not been diligent in pursuing possible violations, does not mean that such authority does not exist for definitional purposes.

186. Instinet No-Action Letter, *supra* note 101, at 78,932 n.64. Instinet has noted that inclusion of retail investors is economically impracticable and would probably face regulatory barriers even if it were not. *Id.* at 78,925.

187. The Wunsch system, now known as the AZX, is the only PTS currently operating under a "limited volume" exemption. MARKET 2000, *supra* note 5, app. IV, at AIV-10.

188. Securities Exchange Act of 1934, 15 U.S.C. § 5 (1995).

189. Wunsch Release, *supra* note 101, at 8378.

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limited volume of transactions; (2) that it is “not practicable” for the exchange to register;¹⁹⁰ and (3) that it is not “necessary for the public interest” that the exchange register because it promises to file adequate reports with the SEC and to conduct internal surveillance procedures that are sufficient to protect investors.¹⁹¹ One of the most controversial aspects of this definition of “exchange” involves how small the volume would have to be to qualify for the exemption. The SEC has indicated, however, that if AZX, or any other non-registered exchange, reaches the volume of the smallest registered exchange, it should approach the SEC for review of its exemption.¹⁹²

2. Regulation as “broker-dealers”

The PTSs have also argued that their activities are more closely akin to those of a traditional “brokerage” firm than to an “exchange.” They often argue that their computer systems are simply the modern “electronic analog” to the telephone networks that have connected traditional brokers and dealers in the past.¹⁹³

Broker-dealers¹⁹⁴ play an important role in the securities markets. They facilitate trading by collecting customer orders and executing them in one of the various possible markets. Broker-dealers are members of the NYSE and

190. The NYSE argued that it should be the “practicability” for the SEC, rather than for the exchange, that should be the standard. *Id.* at 8378 n.20.

191. *Id.* at 8381.

192. *Id.* at 8380 n.40. According to the NYSE, the 1993 Total Share Volume in NYSE-listed stocks (which comprise most of CSE trading) for the CSE was 1,045,758,000. *See* 1993 NYSE FACT BOOK, *supra* note 27. The triggering volume for AZX would presumably be around 1 billion shares. Actual trading volume for the PTSs is extremely difficult to determine, given that PTSs are not currently required to report their volume for the systems separately from their broker volume reported to the NASD. Interview with James E. Shapiro, Managing Director, Economic Research, New York Stock Exchange, New York, New York (Mar. 31, 1995). Although it is unlikely that any have yet reached the CSE’s volume, some may be close. The NYSE’s most current estimates indicate that AZX’s average daily volume in NYSE-listed shares in 1993 was 385,000 shares, which translates into about 97 million shares for the year, in NYSE-listed shares alone. (Unpublished NYSE document on file with author.) AZX reported its January, 1994 daily volume at over 1.1 million shares. ITGI Press Release, *supra* note 128. This number, however, probably includes both sides of the trade and thus translates to about 600,000 shares. If this rate continued for the entire year, it would translate into over 1 billion shares. POSIT estimated its 1993 volume at 2 billion shares, which probably translates to about 1 billion shares. *Id.* These numbers indicate that both POSIT and AZX may be close to reaching the “limited volume” number.

193. Instinet No-Action Letter, *supra* note 101, at 78,918.

194. Although most firms act as both “brokers” and “dealers,” these two entities have different functions as defined under the Act. Under the 1934 Act, a “broker” is defined as “any person engaged in the business of effecting transactions in securities for the account of others, but does not include a bank.” Securities Exchange Act of 1934, 15 U.S.C. § 3(a)(4) (1995). Generally, brokers act as agents in transactions, accepting orders from customers and attempting to execute those orders on the best possible terms. For providing these execution services, they earn commission fees. The Act defines a “dealer”, on the other hand, as “any person engaged in the business of buying and selling securities for his own account, through a broker or otherwise, but does not include a bank, or any person insofar as he buys or sells securities for his own account, either individually or in some fiduciary capacity, but not as a part of a regular business.” *Id.* at § 3(a)(5). In general, dealers act as principals in transactions, trading for their own accounts and earning profits on the spread. The spread allows them to buy low for their own accounts and then sell high, profiting from the price differential.

other exchanges and thus, provide access to those trading floors where trades are executed. In the NASDAQ market, the dealers create the market when they act as "market makers" who are willing to accept and fill orders based on the firm quotes they have entered into the system. Traditionally, brokers and dealers have conducted business either through their personnel located on a trading floor or, in the NASDAQ market, through the telephone communications between interested traders and market makers. In more recent years, the exchanges have computerized some of the broker-dealer functions by developing associated execution systems that allow broker-dealers to send orders to the exchange floor electronically, like NYSE's SuperDOT system.

Individuals or firms that fall under the definition of "broker" or "dealer" are required to register with the SEC and become a member of an SRO. All brokers and dealers are members of the NASD, which is primarily responsible for policing their activities. Registration as a "broker" or "dealer" triggers a panoply of rules, such as the customer protection rule¹⁹⁵ and the net capital rule,¹⁹⁶ designed to prevent fraud by broker-dealers. Broker-dealers are required to report their transactions to the NASD for reporting to the Consolidated Tape.¹⁹⁷

The PTSs repeatedly highlight the ways in which they act as brokers rather than as exchanges. Instinet, for example, emphasizes that its primary role is to accept orders from customers, which it then carries to a market maker or specialist for execution, or communicates either to other institutional customers or to other broker-dealers.¹⁹⁸ Instinet claims that it does not act as a dealer and does not transact for itself through the system,¹⁹⁹ but rather limits its activities to classic brokerage functions which include carrying orders to specialists or market makers on behalf of clients who wish to maintain anonymity or executing orders that are matched in the system strictly on an agency basis.²⁰⁰ Instinet argues that because it acts as a broker, it should be regulated under "functional regulation" principles.

Despite these arguments, PTSs do deviate from traditional brokerage functions in several crucial ways. Instinet, for example, is not a "passive" pricing system; it engages in price discovery by allowing customer orders to interact directly and reach prices between the spread, a practice that is often

195. 17 C.F.R. § 240.15c3-3 (1995).

196. 17 C.F.R. § 240.15c3-1 (1995).

197. MARKET 2000, *supra* note 5, app. III, at III-3.

198. Instinet No-Action Letter, *supra* note 101, at 78,929.

199. *Id.* at 78,924.

200. In fact, Instinet often argues that its actions do not even rise to the level of typical "brokerage" activity in many respects. For instance, Instinet's order routing service, where entered orders are simply routed directly to floor specialists or market makers who have entered into an agreement with Instinet to guarantee execution of any trades routed to them in this manner, does not even involve the participation of INC, Instinet's associated broker, to carry the orders to the floor. *Id.* at 78,929. In addition, Instinet has little or no discretion over its customers accounts; the system allows the customer to give extremely specific instructions as to how its orders should be handled. *Id.*

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associated with an exchange rather than a broker.²⁰¹ The SEC has also noted significant differences between the PTSs and the telephone communication networks relied on in the past:

Automated trading information systems, however, differ from these traditional communications devices in a number of significant respects, among others: (1) they can be used solely in securities transactions and not for general purposes, (2) there are varying limitations as to the users of the system facilities, (3) their internal programming imposes a high degree of restriction on the content of the messages that may be sent over them, (4) the identity of persons sending messages over the systems is always known to those systems but, depending on the system, may never be known to the recipients of the messages, and (5) the systems themselves can be programmed to determine when a transaction has been executed.²⁰²

Therefore, PTSs argue that they are not exchanges for purposes of regulation, but that they do perform some of the functions of exchanges, such as price discovery.

B. *Regulation Through a New Structure: Rule 15c2-10*

As mentioned above, the SEC has proposed new Rule 15c2-10 twice, both times withdrawing it prior to adoption. The SEC re-proposed Rule 15c2-10 in 1989 with substantial modifications from its original form and a much more detailed discussion of the underlying policy issues concerning regulation of these systems. This discussion, as well as the substance of the proposal, was informed in large part by the SEC's experience with the regulation of the systems through its no-action policy. The SEC noted that it had received substantial criticism for its no-action approach, which neither gave the public a chance to comment nor provided potential sponsors with a reliable regulatory regime.²⁰³ While acknowledging that the systems were currently subject to some regulation by the NASD by virtue of the participation of registered broker dealers, the SEC also explicitly acknowledged the limitations of such regulation in light of the increased volume of PTSs.²⁰⁴

The SEC then directly addressed several of the regulatory issues surrounding the development of PTSs. First, the SEC expressed its view that these systems were not "exchanges"²⁰⁵ and that regulating them under section 6

201. 1993 House Hearings, *supra* note 9, at 539 (Instinet Corporation's Responses to Post-Hearing Questions). Instinet made this argument in response to concerns regarding PTSs "free-riding" off the price discovery services of the traditional exchanges; ironically, it is also the argument which characterizes them as such exchanges.

202. Proposed Rule 15c2-10, *supra* note 153, at 83,682.

203. Proprietary Trading Systems, Exchange Act Release No. 26,708, *supra* note 153, at 80,055 (referencing letters from the NYSE, Amex, CBOE, and the SIA.) The SEC itself also indicated that the no-action approach posed difficulties for coordination with international authorities for intermarket linkage, regulation, and surveillance.

204. *Id.* at 80,059 nn.37-38.

205. The SEC emphasized the fact that the systems "have not . . . evolved into interdealer quotation or transaction mechanisms in which participants enter two-sided quotations on a regular or

would be inappropriate on several policy grounds: (1) it would act as a substantial "barrier to entry" and would discourage development of the systems by imposing costly regulatory burdens;²⁰⁶ and (2) it would jeopardize the ability of institutional investors to participate directly in the systems because of the section 6 restrictions on the types of entities that qualify for "membership."²⁰⁷ In addition, the SEC noted that since participation in these systems was generally limited to institutional investors, the need for extensive regulatory oversight was not as urgent as it was for those systems that included retail investors.²⁰⁸

Second, the SEC briefly discussed the concerns raised by the other markets that PTSs were not bearing their fair share of the regulatory burden and thus were competing unfairly against the established markets for order flow. The SEC failed, however, to discuss the validity or implications of these concerns, simply concluding that "it is important for sponsors of these systems to accept clear responsibility for enforcing compliance by their participants with the securities laws."²⁰⁹

Like the original Rule 15c2-10, this revised version would also have required system sponsors to file a proposed plan, which would have become operational only after the SEC declared the plan "effective."²¹⁰ The rule would apply to all "trading systems," as defined by the rule, with the following exceptions: (1) systems that were limited to use by their own retail customers, thus serving merely to "automate the internal execution functions traditionally engaged in by an integrated broker-dealer"; (2) systems acting as "brokers' brokers" for non-equity securities; and (3) systems operated by a national securities exchange or association, such as NYSE's DOT or the NASD's SOES.²¹¹ The filed plan would have included a list of specified information, including: (1) a detailed description of the system, its method of operation, and the types of securities that would be traded in it; (2) a description of procedures supervising compliance with the securities laws, and an agreement to report violations or suspected violations to the SEC; (3) a description of recordkeeping procedures and an agreement to adequately report relevant information to the SEC; (4) a description of participant eligibility, including financial soundness requirements; and (5) a description of procedures for dealing with system failures and an agreement to report such failures to the

continuous basis, thus ensuring a liquid marketplace." *Id.* at 80,059.

206. *Id.* The SEC has acknowledged that regulatory costs do not increase in a linear fashion and thus impose a larger burden on smaller volume systems. *See Wunsch Release, supra* note 101, at 8382.

207. Proprietary Trading Systems, Exchange Act Release No. 26,708, *supra* note 153, at 80,059 n.31.

208. *Id.* at 80,059 n.32.

209. *Id.* at 80,060.

210. The SEC would have followed the approval procedures of Rule 11Aa3-3-2, requiring approval of the plan within at least 180 days of submission. *Id.* at 80,062.

211. *Id.* at 80,061.

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SEC.²¹² The SEC articulated a three-prong standard it would apply in determining whether or not to approve a plan:

- (i) whether the sponsor and system had the ability to comply with the terms of the plan;
- (ii) whether the plan is “necessary or appropriate in the public interest, for the protection of investors and the maintenance of fair and orderly markets and to remove impediments to and perfect the mechanisms of a national market system. . .”; and
- (iii) whether the plan “does not impose a burden on competition.”²¹³

The rule also formalized the procedure for amending the existing plan. The amendment procedure would be essentially the same as the Rule 19b-4 procedure, except that all changes would take effect within thirty days unless the SEC specifically announced that it would publish the rule and seek comment from the public. In addition, system sponsors would also be allowed to take advantage of section 19(b)(3)(A), which would enable certain SRO rules to take effect immediately.²¹⁴

The arguments of the PTSs are not such unreasonable interpretations of the statutory language to merit such minimal discussion by the SEC. In reality, the SEC may have been more persuaded by the policy concerns raised by the PTSs than by their interpretations of the statutes. These policy arguments represent much of the debate concerning the underlying market structure and the SEC’s vision of its strengths and weaknesses.

In the 1975 Amendments, Congress articulated several broad policy goals which it expected the NMS to achieve, including efficient executions, fair competition in the markets, increased dissemination of information, increased “best execution,” and an increased ability for investors to execute orders without dealer participation.²¹⁵ The NMS legislation seemingly adopted a decentralized version of the market by emphasizing certain characteristics of intermarket competition for order flow. However, the call for market linkage also seemed fueled by the desire for centralization. Thus, the 1975 Amendments fostered uncertainty with regard to the structure of the securities markets. This dual and somewhat conflicting view articulated in the NMS legislation has given both sides of the PTS debate an opportunity to use the legislation to their own advantage and has left the SEC with no clear mandate as to how to approach the market structure issue.

The PTSs have repeatedly emphasized the benefits of their system with regard to the furtherance of NMS goals.²¹⁶ They correctly point out that

212. *Id.* at 80,062.

213. *Id.*

214. *Id.* at 80,063.

215. *See, e.g.,* LOSS & SELIGMAN, *supra* note 55, at 2485 n.36.

216. *See, e.g.,* 1993 *House Hearings*, *supra* note 9, at 454 (prepared statement of Michael Sanderson, President and Chief Executive Officer, Instinet Corporation); *id.* at 484 (prepared statement

PTSs accomplish several of Congress's stated goals, namely the increased use of advancing technology to modernize the U.S. securities market, an increased opportunity for investors to avoid dealer participation, and the enhancement of "best execution"²¹⁷ achieved by keeping broker-dealers better informed of their trading options. PTSs heighten the competition between markets, thereby pressuring those markets to provide better services in the growing high-tech securities trading profession.

The exchanges and the NASD, on the other hand, have been critical of the role PTSs play in the current regulatory environment.²¹⁸ The objections of the NYSE and the NASD are probably at least partially motivated by competitive concerns; they fear the diversion of significant portions of order flow away from their systems and the consequent reduction of the value of participation in their systems. The NYSE argues that without further regulation, the PTSs will only further exacerbate the already somewhat fragmented market, in opposition to the NMS goals.²¹⁹

The SEC has, despite the exchanges' arguments, recognized the potential for PTSs to help achieve NMS goals.²²⁰ The SEC is concerned about fashioning a regulatory regime that will continue to encourage the innovation that PTSs have already brought to the markets, both directly and through their impact on the development of similar technologies by the established exchanges, while also adequately overseeing these systems with respect to investor protection and market structure implications.²²¹ The SEC's inability to navigate aggressively the competing NMS goals and the various arguments of PTS critics and proponents has led to the inconsistent regulatory efforts to date.

C. *Recent Regulatory Action: Market 2000, New Rule 17a-23, and Proposed Amendments to Rule 11Ac1-1*

In 1992, the SEC announced that it was "undertaking a study of the structure of the U.S. equity markets and of the regulatory environment in

of Raymond L. Killian, Jr., President, ITG, Inc.).

217. What constitutes "best execution" is by no means clear; however, it usually includes some component of achieving the lowest price (for a purchase) or the highest price (for a sale) among the various markets. Order Execution Obligations, *supra* note 8, at 52,793.

218. The NYSE and the NASD have made different arguments against the current regulation of PTSs. The NASD has generally supported the existence of PTSs in their current form, but has called for increased regulation of them in order to level the regulatory playing field. The NASD believes that the PTSs have not "had an adverse impact on market quality." Letter from Joseph R. Hardiman, President, NASD to Jonathan G. Katz, Secretary, SEC, *supra* note 150, at 14. The NYSE, on the other hand, has been more critical of the potential for PTSs to adversely fragment the market. *See 1993 House Hearings*, *supra* note 9, at 447-78 (prepared statement of Edward A. Kwalwasser, Executive Vice President, NYSE).

219. *Id.*

220. MARKET 2000, *supra* note 5, Study III, at III-1 (discussing the benefits of diverse markets); Rule 17a-23 Proposal Release, *supra* note 99.

221. MARKET 2000, *supra* note 5, Study III, at III-1 to III-2.

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which those markets operate.”²²² Ambitiously entitled “Market 2000,” the goal of the study was to analyze the effects of several significant market changes. Among those identified were the increasing concentration of holdings in U.S. equities, the increasing use of new financial products and new trading strategies, and the development of new trading technologies, including the growth of “alternate” markets such as proprietary trading systems. The study, released in January 1994, included numerous recommendations, some of which were aimed at PTSs and some of which were directed at the structure of the market in general. In the opening paragraphs of the SEC statement accompanying the release of the Market 2000 report, the SEC noted that “the title ‘Market 2000’ has proven too facile.”²²³ Several commentators have criticized the study, both in terms of its approach and its failure to confront the more difficult regulatory issues comprehensively.²²⁴ The report’s treatment of the PTS issue is no exception.

1. New Rule 17a-23

The Market 2000 study found that Rule 15c2-10 was not the most effective way to regulate “broker dealer trading systems” (BDTSs) and suggested that a new rule should be proposed to increase the SEC’s information about these systems.²²⁵ In December 1994, in response to some of the recommendations of the Market 2000 report, the SEC finalized new Rule 17a-23, which increases the recordkeeping and reporting requirements of these systems. Rule 17a-23 seeks to regulate BDTSs²²⁶ as broker-dealers rather than as limited

222. U.S. Equity Market Structure Study, *supra* note 65, at 32,587.

223. Statement by the SEC Upon Release of the Market 2000 Report (Jan. 27, 1994), in MARKET 2000, *supra* note 5, at v.

224. Joel Seligman, *Another Unspecial Study: The SEC’s Market 2000 Report and Competitive Developments in the United States Capital Markets*, SYMPOSIUM, SHAPING REGULATORY POLICY FOR THE CAPITAL MARKETS, SEC. BUS. LAW ABA, (Sept. 16-17, 1994); *see also* Christi Harlan, *Market 2000 Sets Its Sights on the Present*, WALL ST. J., Dec. 31, 1993, at 15.

225. MARKET 2000, *supra* note 5, Study III, at III-12. In a telephone interview, SEC staff attorney Kristen N. Geyer noted that several new systems had become operational around the time of the 1989 proposal, and more have begun operations since that time, giving the SEC more information from which to propose the new rule. Telephone Interview with Kristen N. Geyer, Staff Attorney, SEC (Mar. 15, 1994).

226. The SEC has renamed these systems as “Broker Dealer Trading Systems.” This new term encompasses not only the systems previously called “Proprietary Trading Systems,” but also expands the definition to include some automated trading systems operated by third market makers. Rule 17a-23 Proposal Release, *supra* note 99, at 8368; Rule 17a-23 Adoption Release, *supra* note 155, at 86,119 (determining that the scope of covered systems is equivalent to that in the proposed rule). Specifically, the new rule defines “broker-dealer trading systems” to mean:

any facility that provides a mechanism, automated in full or in part, for: (i) collecting, receiving, disseminating, or displaying system orders; and (ii) matching, crossing, or executing system orders, or otherwise facilitating agreement to the basic terms of a purchase or sale of a security between system participants, or between a system participant and the system sponsor, through use of the system or through the system sponsor.

17 C.F.R. § 240-17a-23(b)(2) (1995).

volume exchanges or under a new regime as was envisioned by Rule 15c2-10.²²⁷ The rule lists certain records that sponsors²²⁸ of BDTs are required to keep, including system participants; daily trading summaries identifying securities traded, transaction volume and orders entered into the system; records of each transaction, including the time, price, and method of execution; and any notices generally sent by the sponsor to participants.²²⁹ The BDTs sponsor's reporting requirements are related to new Form 17a-23, which consists of three parts. Part I must be filed at least 20 days prior to the beginning of the operation of the BDTs, and requires a complete description of the system.²³⁰ Part II requires the BDTs sponsor to file quarterly reports that summarize system trading for each quarter. Part III must be filed within 10 days after the operation of the system is terminated.²³¹

The SEC articulated two major goals underlying the regulatory approach of Rule 17a-23: (1) collecting information about BDTs which would allow the SEC to develop a better regulatory approach in the future; and (2) providing prospective sponsors with more certainty as to their regulatory responsibilities.²³² The SEC noted that although the sponsors of the systems were all registered broker-dealers and thus subject to their own recordkeeping and reporting requirements under section 17, they had not been required to identify separately transactions they had made through the system.²³³ The SEC noted that

[t]his lack of system-specific information makes it difficult for the SEC to evaluate the operation of BDTs with regard to national market system goals, to monitor the

227. The SEC adopted the arguments of the PTSs, concluding that, "the functions performed by BDTs are most closely aligned with the functions performed by broker-dealers; consequently, broker-dealer regulation of BDTs sponsors is appropriate." Rule 17a-23 Proposal Release, *supra* note 99, at 8369 n.10.

228. The rule specifically defines the "sponsor" of a BDTs to be:
any entity that organizes, operates, administers, or otherwise directly controls a broker-dealer trading system; and, if the system operator of such broker-dealer trading system is not a registered broker or dealer, any registered broker or dealer that, pursuant to contract, affiliation, or other agreement with the system operator, is involved materially on a regular basis with executing transactions in connection with the use of the broker-dealer trading system, other than solely for its own account or as a participant in the broker-dealer trading system.

17 C.F.R. § 240.17a-23(b)(3) (1995). In other words, each of these systems is expected to include the participation of at least one registered broker-dealer, which will be the hook for bringing it under the BDTs umbrella. Functionally, this approach will work because, as the SEC has repeatedly emphasized, the activities undertaken by these systems at some point require someone to execute and clear the trade, functions which could not be done legally without registration as a broker-dealer. *See, e.g.*, Rule 17a-23 Proposal Release, *supra* note 99, at 8368 n.4.

229. 17 C.F.R. § 240.17a-23(c) (1995). The sponsor is required to keep these records for three years.

230. Rule 17a-23 Adoption Release, *supra* note 155, at 86,123. In addition, once the system is operating, the BDTs sponsor must make an additional filing 20 days before implementing a "material change" in the program. *Id.*

231. Rule 17a-23 Adoption Release, *supra* note 155, at 86,123-31.

232. Rule 17a-23 Proposal Release, *supra* note 99, at 8368.

233. *Id.* at 8368-69.

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competitive effects of these systems, to ascertain whether broker-dealer regulation remains appropriate for the operation of such systems, and to identify areas where monitoring of such systems may be improved and where SRO surveillance may be more appropriately tailored to the detection of fraudulent, deceptive and manipulative practices in an automated environment.²³⁴

The SEC's experience with several PTSs that have begun operations since 1987 may have increased the SEC's knowledge of these systems. More importantly, as of March 1995, the SEC had not received any formal complaints regarding abuses or other problems in these systems, and the current participation of registered broker-dealers who are subject to regulatory oversight and rules (such as capital requirements, best execution, and "know your customer" rules) may provide sufficient protection for the investors who use them.²³⁵ The SEC did acknowledge, however, that it intends to use any additional knowledge it gains to examine the SRO oversight of these systems with respect to the potential for fraudulent or manipulative practices.²³⁶

In deciding to regulate these systems as broker-dealers, the SEC was careful to note that registration as a BDTS did not permanently resolve the issue of their possible future classification as "exchanges" or other entities. In a footnote to the proposing release, the SEC noted that, "[t]he Rule does not address the issue of whether a particular trading system may be required to register as a national securities exchange, clearing agency, or other SRO. Sponsors of BDTSs seeking relief from exchange, clearing agency, and other SRO registration requirements may continue to request no-action positions from the Division."²³⁷ Thus, the SEC seems to have left itself the option of revisiting the issue of whether or not these systems could fall under this category in the future and the option of seeking exchange or SRO registration from a system that had made the appropriate Rule 17a-23 filings.

2. Proposed Rule 11Ac1-1 Amendments

In October 1995, the SEC proposed new regulations, aimed at improving executions for all investors in the U.S. equity markets. These proposals would

234. *Id.* at 8368. This lack of separate information means that it would be difficult to determine, for instance, whether a system has risen above the "limited volume" level and makes it difficult for the SEC to monitor the accuracy of advertising materials that the PTSs distribute, which often refer to the trading volume in the systems.

235. See Telephone Interview with Kristen M. Geyer, *supra* note 235. Geyer also noted, however, that one of the purposes of new Rule 17a-23 was to give the SEC more information to help determine whether or not the broker-dealer provisions are, in fact, providing sufficient protection for investors using the systems. See also Rule 17a-23 Proposal Release, *supra* note 99, at 8371 (discussing the potential fraud problems such systems may present that are, "typically associated with markets, not with traditional broker-dealers," and the SEC's need for additional information to assess this potential).

236. Rule 17a-23 Proposal Release, *supra* note 104, at 8371 (noting that the PTSs may have the potential to experience fraud problems "typically associated with markets, not with traditional broker-dealers").

237. *Id.* at 8373 n.40.

amend Rule 11Ac1-1 (the Quote Rule) and Rules 11Ac1-4 and 11Ac1-5, which regard best execution and limit order display obligations, to "improve the opportunity of investors to obtain the best execution possible for their orders."²³⁸

The SEC has proposed to amend the Quote Rule to require that market makers or specialists who display quotes in PTSs include the price and volume of those quotes in their publicly displayed quotes.²³⁹ The SEC proposal changes the definition of "bid" or "offer" under the Quote Rule to include any bid or offer that is displayed in a PTS, thus triggering the commensurate duty to distribute that quotation publicly, as required by the current terms of Rule 11Ac1-1.²⁴⁰ This new requirement would apply to the market maker or specialist even if the customer has specifically requested that her trading interest not be displayed.²⁴¹

In proposing this amendment, the SEC seems to have shifted its views of some of the market structure issues previously discussed in the PTS context. The SEC summed up its motivations for the new proposal by noting that:

due to an increasing number of electronic communications networks being developed by market participants and market centers, quotation information is becoming splintered, with OTC market makers and specialists publishing different proposed trading prices in different quotation systems, some with limited access. As a result smaller retail customers do not always obtain the benefit of the best available price. While these systems may have increased intermarket competition, the SEC believes that consolidated quotations and their dissemination to the public continue to be important elements of the NMS. Moreover, while competition is an important goal of the NMS, competition based on fragmented quotations may reduce efficient pricing of publicly disseminated bids and offers, thereby impeding the NMS goal of consolidated quotations. More importantly, the availability of accurate quotation information enables investors to police the efforts of their brokerage firms.²⁴²

This articulation of the balance between encouraging competition and

238. Order Execution Obligations, *supra* note 8, at 52,792. Although this Article will focus on the aspect of these rule proposals aimed at PTSs, the rules will also: (1) expand the public quoting obligations for broker-dealers who account for more than 1% of the volume in a listed security to non-Rule 19c-3 securities, for which such quoting is currently only voluntary; (2) establish requirements for the uniform public display of limit orders; (3) clarify broker-dealers' duties to seek price improvement for their customers' orders under the best execution obligations, particularly in light of changing technology that may alter the broker-dealers' feasible monitoring of multiple markets. *Id.* at 52,794.

239. The broker-dealers will be required to include the volume up to a level determined by the relevant SRO. *Id.* at 52,798.

240. *Id.* at 52,797-98. The new quoting requirements will only extend to firm quotes entered by the broker-dealers, and will not extend to the "indications of interest" which are also entered into some of the PTSs, nor will it apply to odd-lot orders. *Id.* at 52,798.

241. *Id.* Note that this is in contrast to the proposed amendments regarding the duties of exchange specialists to publicly display limit orders; the specialists will still be allowed to conceal interests at the specific request of a customer. *Id.* at 52,802. The SEC has specifically requested comment as to whether such a customer request should be honored if the broker is acting on a purely agency basis when placing the order into the PTSs. *Id.* at 52,798.

242. *Id.* at 52,796-97.

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maintaining the integrity of the markets contrasts with the SEC's similar discussion of the issues in the Market 2000 report that generated the Rule 17a-23 concept.²⁴³

This proposal would not have any direct effect on the institutional trading interest that is now displayed in PTSs. Rule 11Ac1-1 applies only to market makers and specialists involved with exchanges or associations. As such, the rule cannot directly regulate the activities of the institutional investors that enter trading interest directly into these systems without the assistance of a regulated intermediary. Thus, under the new proposal, institutional investors would still be free to display their interest in these systems without distributing them more widely to the investing public.

D. *A Critique of Recent Regulatory Action*

After over twenty years of attempting to promulgate a rule regarding PTSs, the SEC has finalized Rule 17a-23, which seems only to perpetuate its incomplete approach to the issue. The SEC has justified its approach by claiming that it needs more information before it can determine what would be the appropriate regulatory regime.²⁴⁴ In reality, however, the SEC may have pulled back from a more aggressive regulatory program in the face of pressure both from the system sponsors and from the general deregulatory environment. Rather than address the issue in a comprehensive way, the SEC has called for a relatively uncontroversial information collection approach, while continuing to ignore unresolved issues about the potential for regulation of these systems as exchanges or other SROs. Thus, while the SEC has indicated its attempts to clarify the definition so that PTS developers could enter the competitive market with a clearer understanding of the rules,²⁴⁵ Rule 17a-23 has left the industry with continuing uncertainty as to the future of PTS regulation.²⁴⁶

The new rule has several specific problems. First, because the SEC wanted to reach the systems, and not the broker-dealers operating the systems (over whom the SEC already has adequate regulatory oversight), it constructed the definition of "sponsor" in a way that avoided giving the system operators a

243. In the Market 2000 report, the SEC concluded that, "the U.S. equity markets today include multiple, varied market centers. The competition around these market centers provides many benefits for the users of the markets. Moreover, the dispersion of order flow among market centers has not impaired price discovery or market quality. While primary market competitors use the externalities provided by the primary markets, the latter are adequately compensated for their primary market status." MARKET 2000, *supra* note 5, Study III, at III-3.

244. Rule 17a-23 Proposal Release, *supra* note 99, at 8368.

245. *Id.*

246. See, e.g., ITGI FORM 10-K, *supra* note 120, at 6 (noting that "although the adoption of Rule 17a-23 in the form proposed by the Commission would not have any significant effect on the operation of the Company's business, one of the stated purposes of the Rule is to provide the Commission with information necessary to monitor and evaluate automated trade execution systems. As a result, there can be no assurance that the Commission will not in the future seek to impose more stringent regulatory requirements on the operation of automated trade execution systems such as POSIT.").

loophole around the reporting requirements by simply contracting out their brokerage activities. Thus, the "sponsor" definition reaches not only broker-dealers who own and operate such systems, but also any broker-dealer who "is involved materially on a regular basis with executing transactions in connection with the use of the broker-dealer trading system."²⁴⁷ In the event that a non-registered BDTS owner develops a system, similar to Lattice, where users can choose to route their orders to any one of ten different broker-dealers who are under contract with the system to accept and execute such orders, the SEC, while getting reporting from the individual broker dealers, will still not be able to collect the BDTS system information it desires, resulting in the same lack of information it currently faces.²⁴⁸

Secondly, the SEC has not addressed the real regulatory problems that arise when categorizing these entities as broker-dealers without recognizing that these systems are not traditional brokerage firms. For instance, under Rule 17a-23, the SEC still lacks the ability to approve the fairness of the systems' trading rules,²⁴⁹ to monitor other operational and procedural aspects of the system,²⁵⁰ or to monitor the validity of the advertising claims of the systems, such as the extent to which the systems comply with primary market protection claims.²⁵¹

Finally, treating PTSs as broker-dealers fails to address structural issues with regard to the existing exchanges such as fragmentation and unfair competitive advantages. For example, the Market 2000 report mentions proposals by commentators to split the market by user into separate markets for institutional and retail investors.²⁵² The SEC rejects this approach because it would jeopardize the efficiency and integrity of the markets.²⁵³ PTSs, however, may be effectively creating this split between institutional and retail investors by routing institutional trading away from the traditional exchanges.

247. 17 C.F.R. § 240-17a-23 (b)(3) (1995).

248. The SEC would probably be uncomfortable allowing such a system to operate, although it is unclear under what authority it would prevent such a structure given that the 17a-23 approach has explicitly rejected the 15c2-10 SEC pre-approval powers.

249. 1993 *House Hearings*, *supra* note 9, at 51 (prepared statement by Joseph R. Hardiman, President, NASD); *Id.* at 153 (joint statement by the Boston, Midwest, Pacific, and Philadelphia Stock Exchanges); *Id.* at 445 (prepared statement of Edward A. Kwalwasser, Executive Vice President, NYSE).

250. *Id.* at 445-46 (prepared statement of Edward A. Kwalwasser, Executive Vice President, NYSE).

251. *Id.* at 153 (joint report by the Boston, Midwest, Pacific and Philadelphia Stock Exchanges).

252. See, e.g., Letter from Charles R. Hood, Senior Vice President and General Counsel, Instinet Corporation to Jonathan G. Katz, Secretary, SEC 19 (Oct. 19, 1992) (available in SEC Public Reference Room, File No. S7-18-92) (discussing the benefits of separation between institutional and individual investors); Letter from Thomas M. O'Donnell, Chairman, Securities Industry Association to Jonathan G. Katz, Secretary, SEC 5-7, 10 (July 1, 1993) (available in SEC Public Reference Room, File No. S7-18-92) (discussing the different needs of institutional and individual investors and the benefits of allowing them to trade in separate markets); Harris, *supra* note 81 (discussing generally the benefits and potential harms of separating institutional and individual investors); CALPERS Letter, *supra* note 22 (discussing institutional needs for separation).

253. MARKET 2000, *supra* note 5, Study VI, at VI-3.

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Rule 17a-23 failed to address the PTSs' contribution to the separation of markets.²⁵⁴ The rule also failed to resolve issues regarding unfair intramarket competition and the role of regulation in maintaining the integrity of the markets.²⁵⁵

To be fair, the enhanced reporting requirements of Rule 17a-23 will increase the SEC's insight into the role of PTSs.²⁵⁶ The statistics available to the public regarding order flow in the systems is currently provided solely by the PTSs themselves, usually in the form of advertising literature.²⁵⁷ The increased reporting will help only the SEC, as the statistics will not be publicly available. A better rule would allow the public to view volume numbers to determine the accuracy of the advertising claims, particularly given that the SEC has decided to let market forces determine the continuing vitality of PTSs. Ultimately, the failure to fashion a more comprehensive approach to PTS regulation means that the SEC will adopt a piecemeal approach to regulating these systems when specific problems arise.

The SEC's recent proposal to amend Rule 11Ac1-1 with regard to PTSs is an example of the limitations of piecemeal regulation. In proposing the changes to Rule 11Ac1-1, the SEC noted several specific problems that might develop as a result of the new amendments. First, the SEC noted that the possibility for broker-dealers to publish quotes in the PTSs at price differentials that are much smaller than for the NASD or the NYSE might create technical difficulties.²⁵⁸ This problem, while addressed only in passing in the proposing release, will be a major hurdle to effective implementation of these rules. Either the NASD will have to convert to a smaller tick size quickly or the market makers and specialists using the PTSs will have to increase the spreads of the quotes they enter in the PTSs, a result which would seem contrary to the SEC's general efforts to reduce spreads.

Second, the SEC noted that as soon as a market maker enters a bid on to

254. In the SEC's most recent discussion of the issue, it has recognized the PTSs' contribution to the potentially disruptive split into tiered markets. Order Execution Obligations, *supra* note 8, at 52,792.

255. The SEC, in the past, has recognized that regulation of PTSs as broker-dealers may be inappropriate precisely because it does limit surveillance of these structural and system-based issues. Proprietary Trading Systems, Exchange Act Release No. 26,708, *supra* note 153, at 80,060 n.38.

256. While the SEC certainly will have *some* additional information as a result of this rule, it is unclear how much, as the reporting requirements under the current no-action letters is, in the SEC's words, "substantially similar" to the requirements of Rule 17a-23. Rule 17a-23 Proposal Release, *supra* note 99, at 7.

257. The NYSE has tried to compile statistics regarding the real flow of trades through the PTSs, although it is difficult because for many of the systems the publicly released statistics may be significantly overstated, compared to the NYSE statistics, through double counting (i.e. counting both sides of the trades as shares "executed" through the system). Interview with James Shapiro, *supra* note 192.

258. Order Execution Obligations, *supra* note 8, at 52,798. For instance, if the broker-dealer is posting a quote in a PTS at a 1/16 of a point, it would be difficult to publish that quote in a system accepting orders at 1/8 of a point. The SEC specifically asked for comment on this difficulty, noting that it "does not intend to create incentives for OTC market makers or specialists to increase the size of the fractions they would quote" in PTS, and went on to conclude that the better solution might be to lower the minimum price variations in the established markets. *Id.*

one of these systems, it would then be obligated to publish two-sided quotes in the stock.²⁵⁹ This may lead to another unintended consequence of the rule; to the extent that some market makers may not have been participating in the public market for a given security, but may have been willing to display trading interest in a PTS, they may withdraw their interest from all publication rather than trigger public market making obligations. Such a result would ultimately decrease transparency on the whole.

These problems are joined by some others not mentioned by the SEC. The release indicated that the new quote obligations will not apply to "indications of interest" entered in the system, but rather will extend only to firm quotes.²⁶⁰ Thus, market makers or specialists wishing to make use of the anonymity and other benefits of the PTSs may simply convert formerly firm quotes to "indications of interest," thus allowing them to achieve substantially similar trading results without any increase in the transparency desired by the SEC.

As with Rule 17a-23 and the SEC's historical approach to the PTS issue, however, the real weakness with this proposal lies in its failure to spring from a more comprehensive approach to the regulation of PTSs. The SEC proposed these new amendments in an attempt to increase the transparency of the markets. In theory, this could help to both narrow the public spread²⁶¹ and increase the ability of retail investors to monitor the best execution efforts of their brokers,²⁶² who may be aware of better prices existing in these systems, but who are not accessing them on behalf of their customers.²⁶³ This proposed rule could, in fact, increase investors' awareness of better prices, an awareness that is currently afforded only to the institutional investors who themselves have access to the PTSs. However, because the quote rule is aimed at market makers and specialists who are users of the systems, rather than the systems themselves, a substantial portion of the trading interest displayed in the PTSs—that entered directly by institutional investors—will still be hidden from public view. Thus, while this rule could achieve one of the benefits of transparency—increased best execution through more effective monitoring—it will forgo the full value of some of the other benefits of transparency, such as accurate price discovery and liquidity. Moreover, the failure to approach the PTSs in a comprehensive fashion may result in some of the negative unintended

259. *Id.* The SEC also noted that a rapid withdrawal of the quote from the PTS would not completely save the market maker, since a withdrawal prohibits the individual from making a market in that issue for a subsequent pre-determined time period. *Id.*

260. *Id.*

261. *Id.* at 52,794-95 (noting that the new rules will "enhance competition in publicly disseminated quotes").

262. *Id.* at 52,798.

263. The SEC indicated that what fulfills a broker-dealer's best execution obligations may have changed in light of the recent changes in technology. The SEC further indicated that where it is economically practicable for a broker-dealer to access off-exchange trading environments such as PTSs, they should consider such systems in their search for the best prices for their customers. *Id.* at 52,794.

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consequences discussed above.

Finally, the value of the SEC's conclusions regarding PTSs in the "Market 2000" Report may be hindered by the study's limited consideration of the development of new financial products and the internationalization of the securities market. Several PTSs trade non-equity issues, such as limited partnerships, corporate debt, and options. Providing alternative trading in niche markets may be one of the primary areas where PTSs could strengthen the market. Any new regulation aimed at derivative or other non-equity products, particularly regulations aimed at restricting the sales of these instruments to highly sophisticated and informed investors, would need to incorporate potential trading in the less regulated PTS environments. Internationalization presents additional problems in the PTS context. The NYSE has expressed concern about the potential to trade foreign securities in these systems, securities that would be ineligible for trading on the traditional markets.²⁶⁴ As discussed above, some of the existing PTSs, such as Instinet, already have extensive international linkages and other PTSs are actively seeking global hook-ups. The information about and access to foreign markets that the PTSs can and will provide are additional competitive advantages. In addition, one of the concerns about over-regulation of PTSs is that it may drive much of the institutional trading that is currently attracted to these systems into international trading, even further reducing the ability of U.S. regulators to exert control over this trading.²⁶⁵ Market 2000's failure to address directly the issue of internationalization, and perhaps to explore empirical data on the actual amount of diversion off-shore, weakens its analysis of the PTSs' regulatory challenges.

IV. AN ALTERNATE PROPOSAL

Although the SEC's current approach appears unsatisfying, its underlying motivations are not. The innovation and competition PTSs provide are likely to have positive long-term effects on the securities market and should therefore be encouraged.²⁶⁶ PTSs give investors a range of trading options, from which

264. 1993 House Hearings, *supra* note 9, at 450-451 (prepared statement by Edward A. Kwalwasser, Executive Vice President, NYSE). The SEC has also noted that without adequate regulation of these systems, complying with the terms of agreements with foreign securities regulators might be difficult. Proprietary Trading Systems, Exchange Act Release No. 26,708, *supra* note 153, at 80,055.

265. See, e.g., POSIT Comment Letter, *supra* note 136, at 26; Greg Anders & Craig Torres, *The New Market: Computers Bypass Wall Street Middlemen and Stir Controversy*, WALL ST. J. Aug. 28, 1991, at A1. The development of after hours trading systems also helps stem the diversion of order flow off-shore, which is sometimes done because the U.S. markets are closed. The PTSs have been a major catalyst for the development of these systems, both by directly offering the services, like Instinet's Market Match and Crossing Session services, and by competitively encouraging the development of such facilities by the traditional exchanges, such as the NYSE's Crossing Sessions I and II. See Letter from Joseph Hardiman, President, NASD to Jonathan G. Katz, Secretary, SEC, *supra* note 150, at 26.

266. The experience with Rule 19c-3, which allowed OTC market makers to compete with the NYSE for order flow in some of its listed stocks, suggests that decentralized trading may help, rather than hurt, the individual investor by encouraging lower spreads and reduced costs. Studies indicate that the spreads in 19c-3 securities have lowered, rather than raised, as a result of the intramarket

they can choose the best individual mix of costs and benefits. In addition, the development of PTSs dovetails with the NMS goals outlined by Congress in 1975 by enhancing investor ability to execute trades without dealer participation and increasing intermarket competition. Nevertheless, the SEC's current regulatory approach should be discarded for one that more adequately acknowledges the role these systems play in the market. The SEC should regulate PTSs through an expanded application of a modified version of the "limited volume" exception for exchange registration.²⁶⁷

As discussed in detail above, the SEC has interpreted the definition of "exchange" to exclude most PTSs. The SEC has argued that it is confined to this interpretation by the language of the Act, but, as the Seventh Circuit noted, the SEC would be equally within its discretion to interpret the definition of "exchanges" more broadly.²⁶⁸ The SEC's current interpretation appears driven as much by policy concerns as by the actual language of the Act. Its possible policy concerns include: (1) fears about articulating an interpretation that will be overly broad and might grow uncontrollably; (2) the desire to promote the development of these systems; and (3) fear that increasing regulation will force more trading underground, where the SEC will have even less control.²⁶⁹ As to the second of these concerns, the "limited volume" exception seems equally well suited to foster system development. One of the SEC's concerns is that the regulatory costs associated with exchange status are particularly onerous for the smaller PTSs. The "limited volume" exception resolves this concern, by exempting a new PTS until its volume is such that it can reasonably bear regulatory costs.²⁷⁰ This "limited volume" proposal also addresses the potential problems created by PTSs because only at these larger volumes does fragmentation dramatically affect the market prices for securities, and only at these greater volumes can the other exchanges argue that the systems are providing them with any meaningful or harmful competition.

competition for order flow. *Id.* at 6.

267. At least one other commentator has suggested that the SEC expand its use and application of the limited volume exemption from exchange registration to encourage development of automated trading systems. Nowak, *supra* note 89, at 518-22. Nowak suggested that the SEC create a new rule which codified the application of the limited volume exemption for a certain class of automated systems which would provide markets that provided services substantially similar to the NYSE's. In contrast, this Article proposes that the exemption be applied to a broader variety of systems, not just ones aimed at taking over the NYSE's role. These systems not only automate services similar to those provided by the traditional services, but can also provide needed alternatives in niche markets or for certain market users. These alternative markets could also be beneficially regulated in the "limited volume" structure which strikes a balance between the freedom to innovate and the need to regulate.

268. *Board of Trade of the City of Chicago v. SEC*, 923 F.2d 1270, 1273 (7th Cir. 1991). Alternatively, Congress could seek to clarify the meaning of "exchange" to encompass these systems, by articulating a more precise definition of the term.

269. See also Nowak, *supra* note 89, at 521-22 (discussing the SEC's political concerns regarding the regulation of PTSs).

270. In this respect, it is more appropriate than the congressional discussion of granting the exemption for a specified time period (i.e. a year) during which there is no guarantee that the exchange will reach an operating volume that either justifies, or can bear, additional regulatory costs. See 1993 *House Hearings*, *supra* note 9, at 528.

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The “limited volume” approach, which basically allows for different levels of regulation depending on the size of the system, can only be applied to PTSs with some important modifications. Like the “exchanges” currently operating under section 6, PTSs will be expected to become SROs and thus bear the costs of running their own surveillance and enforcement mechanisms. However, in order for “limited volume” regulation to work, the SEC will have to modify the “exchange” regulation that would be expected of PTSs after they reached the threshold volume. To implement the “limited volume” approach would require a number of steps.

First, the SEC would have to define clearly “limited volume” and specify methods for measurement. A clear line would give PTSs an indication of when higher regulations are triggered and would also provide the possibility for existing exchanges to fall below that line. The SEC could use either a total volume number or another measure, such as the percentage of total market volume in a specific security. The best solution is a combination of both, applied depending on what types of services PTSs offer. For systems that offer trading in a wide variety of equity issues (more like a traditional exchange), a total volume number should be used. A percentage volume number might be more appropriate for the “niche” PTSs that offer trading in a limited number of products, but which may dramatically affect the prices of the stocks they do trade because of the absence of alternate trading arenas. The SEC would have to define carefully the scope of each system and its appropriate measures to prevent PTS evasion of regulation either by limiting itself to a single issue to maintain small volume while significantly affecting price, or by subdividing into smaller related units when trading volumes near the triggering level. To avoid the latter problem, the SEC would have to define the PTS operator to include all affiliated entities, and ensure that volume of all related entities is combined for purposes of determining the volume exemption. Finally, to respond to the claims of PTSs and smaller regional exchanges that the costs of SRO activities at the current volume are economically prohibitive, the SEC should consider raising the volume level that would trigger exchange registration.

Second, the SEC needs to adopt a new rule to govern PTSs operating under the “limited volume” exception, rather than allowing them to operate under either the terms of a no-action letter or under the conditions of the limited volume exception. In addition to maintaining Rule 17a-23’s three-part reporting requirements, the new rule should: (1) require reporting even if the system sponsor is not a registered broker-dealer; and (2) require PTS to maintain internal supervision of compliance with the securities laws, which the SEC will oversee through examination of the PTSs’ reports.²⁷¹ In order to avoid

271. While this structure will require the SEC’s Market Regulation Division to take a more active regulatory role than it has been accustomed to with the other SROs, the small volume of these systems

jeopardizing the confidentiality and proprietary nature of PTS design plans, the SEC should dispense with prior comment, determining whether to grant the exemption without public input. Volume numbers that are reported to the SEC, however, should be released to the public because they do not implicate secrecy concerns regarding the operational facilities of the systems.

Third, the SEC would need to modify or clarify some specific regulatory provisions under section 6 of the Act in order to ensure a smooth transition to full exchange registration. For instance, PTSs need to continue to be able to allow institutional investors to have direct access to the systems, which might require a reinterpretation of "member." The rules of governance regarding the participation of members might need to be changed. Finally, rules regarding SROs' ability to examine the internal operation of their members might need to be altered, to avoid the tension that might develop as institutions or competing broker-dealers are asked to open their books to the PTS sponsor-turned-SRO.²⁷² Admittedly, the SEC's ability to make the necessary changes with regard to section 6 is more problematic, and congressional action could be required either to change the provisions of section 6(b) directly or to allow the SEC more discretion to do so through rulemaking.

Finally, to encourage innovation, the SEC should make a provision for the established exchanges to develop their own alternative systems, such as the NYSE's Crossing Sessions, with a similar regulatory exemption. Under the concept of "functional" regulation, the exchanges should be authorized to develop such systems in the absence of regulatory restraints, from which PTSs will be free.²⁷³

This modified "limited volume" approach would accomplish several things that the Rule 17a-23 approach does not. First, it acknowledges the structural implications of these systems, as distinct from simple oversight concerns that regulation as broker-dealers accomplishes; while approaching these systems as broker-dealers does continue, as the SEC and PTSs point out, to give the SEC some regulatory supervision of these systems, it does not give the SEC the ability to monitor the regulatory issues presented by the PTS as entire systems, rather than as merely automated brokers (i.e. concerns about trading rules or "fair access" by investors). Second, it removes PTSs from the supervision of the SROs, which presently serve as both regulators and competitors, a balance

will minimize the additional burden on the SEC.

272. The transformation to SRO or quasi-SRO status will not be easy, as this short list of potential modifications indicates. In fact, concerns about problems with applying SRO requirements on PTSs has been one major argument against continuation or expansion of the "limited volume" approach. See 1993 House Hearings, *supra* note 9, at 559-62. Note, however, that under the current system, regulated PTSs must open their books to an SRO, the NASD, which also, in some capacities, acts as a competitor.

273. The NASD's recent experience with the introduction of its new Aqcess system illustrates this disparity. The SEC killed the NASD's original proposed system, N-Prove, forcing the NASD to continue operating with *no* system while developing this new one. Even now, with the laborious proposal and comment procedure, the NASD will not be able to actually begin using the system for another six months. Power, *NASDAQ Unveils*, *supra* note 41, at C1.

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which, as discussed above, creates concerns for PTSs about having systematic oversight of their operations.

This proposal also would accomplish some of the goals of the proposed amendments to the Quote Rule with fewer problematic side effects. The current rule proposals, while more fully addressing the transparency and market structure issues than Rule 17a-23 does, have not addressed these issues in a comprehensive way. The current proposals represent a poor trade-off between the need for regulation to consider the structural implications of these systems and the desire to encourage the competition and innovation they have brought to the market. As mentioned earlier, the proposals' failure to reveal institutional trading interest means that price discovery will still be hampered by the existence of PTSs. While the rule revisions do not completely address the structural implications, they also may impose considerable costs on the systems that could stifle further development and innovation. The new rules may drive market makers and specialists out of the PTSs, either because it will no longer represent a unique trading environment for them, or because they will choose not to publish certain quotes in any markets. As mentioned above, one of the advantages of the development of these systems is that they allow investors with different trading needs to choose a trading environment that best represents their needs, i.e. anonymity, low commission costs, immediacy, or liquidity. By forcing market makers and specialists to behave identically with respect to both PTSs and the primary markets, the SEC is undermining the advantages offered by the "menu" of trading options.

The modified "limited volume" approach would, admittedly, impose costs on the system that alternative systems might avoid. One cost that the new rule proposal seeks to ameliorate would remain; trading interest would still not be completely transparent while these systems continue to operate at the lower level capacity. This cost, however, would be reduced to the extent that arbitragers would continue to access both PTSs and the more "public" trading arenas and could work to reduce price differentials between them. Moreover, enhanced best execution obligations which encourage broker-dealers to search PTSs for better prices when acting on behalf of their customers would bring the advantages of PTSs' prices to the retail investor. Finally, this cost would only be borne by the market until the system reaches the pre-determined size, at which point the entire system's obligations to display trading interest to the public market, as well as the system's obligations to publicize trading rules and adopt other SRO functions, would increase.

The benefits achieved in return for these costs, moreover, would be substantial. Overall, the approach outlined here would provide a better balance between the competing goals of the NMS-intramarket competition and centralized pricing. First, it would encourage the continuing development and innovation represented by these systems. This innovation would pressure the larger markets to provide their customers with competitive services and would

encourage experimentation with markets that appeal to different trading interests. This innovation would be accomplished within the lower volume environment where the potential impact on the system, as well as the amount of investor dollars at stake, is lower. At higher volumes, it would address some of the potential for fraudulent trading practices in the systems and would help maintain market integrity by providing protection for the NYSE, which acts as the market of last resort. Market integrity would also be enhanced as the investing public would be prevented from perceiving an unfair institutional versus individual investor split. The SEC has already determined, at least with respect to the traditional exchanges, that these benefits of SRO oversight are worth its costs. Ultimately, this rule encourages development of these systems during the start-up phase, yet provides for a smooth and predictable transfer to more stringent regulations when they reach a size that warrants greater investor protection and more concern for their impact on the market structure.²⁷⁴

V. CONCLUSION

Although PTSs account for only a small percentage of the total trading in U.S. equity issues, this Article has argued that they implicate both individual investor protection concerns and larger questions about how the U.S. securities markets should be structured. Furthermore, the SEC's historical difficulty in implementing NMS goals and tackling structural issues has extended to PTSs.

PTSs offer several market benefits. Their involvement in the market furthers several NMS goals, including intramarket competition and lower intermediary participation in trading. In addition, they may aid market linkage by enhancing order display and order routing among multiple market centers. In the face of these benefits, the existing exchanges argue that a financial crisis will result in the wake of increasing market fragmentation. There is evidence that the exchanges are still operating profitably and thus are not being fatally injured by the presence of PTSs.²⁷⁵ Statistical analysis indicates that investors are also not suffering in the current market. Spreads have generally nar-

274. Although this Article advocates regulation through the "limited volume" exchange mechanism, regulation through the 15c2-10 approach would also be an approach that is preferable to the current system. Rule 15c2-10, in fact, has some advantages to the "limited volume" approach because it avoids the problem of exchange "membership" and exempts the PTSs from the regulatory costs of SRO status which they claim will drive them out of business. Ultimately, however, the "limited volume" approach seems to more adequately match the "functional regulation" approach by treating these systems, which do fill many of the same functions as the exchanges, as exchanges. Moreover, as these systems grow, continuing to regulate them under the auspices of an SRO which is also in competition with them will not work as well as treating them as distinct entities. Rule 15c2-10, however, might provide some useful guidance in fashioning the modifications necessary for the "limited volume" approach as it is outlined here.

275. MARKET 2000, *supra* note 5, Study III, at III-3.

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rowed,²⁷⁶ and average commissions have dropped.²⁷⁷ Arguments regarding the basic superiority of the auction market are also questionable, given that the powerful institutional investors frequently seek systems that offer them services other than those offered by an auction market.

But the development of PTSs does carry real dangers. First, the established exchanges have addressed the role of the NYSE as a market of last resort and their need to be free from regulatory burdens to develop their own systems to compete with PTSs.²⁷⁸ Second, “market competition” alone is not enough to police the development of PTSs. Experience has shown that information inequities in the market do not permit this.²⁷⁹ Third, the shifting of institutional investor order flow to PTSs does produce a retail and institutional investor split. While the import of this split is unclear, a perception that retail investors cannot depend on fair market treatment may undermine investor confidence in the market. Finally, the volume of transactions being routed to PTSs is likely to increase in the future, which will strain the ability to regulate them as broker-dealers.

An examination of the SEC’s attempts to regulate PTSs reveals the ongoing need to regulate PTSs adequately at the initial stage of the development of a computerized trading environment.²⁸⁰ This Article proposes an alternate approach to the regulation of PTSs. Utilizing a modified “limited volume” exemption from exchange regulation would enable the SEC to strike the delicate balance between encouraging the development of PTSs and providing sufficient protection for investors and existing markets.

276. MARKET 2000, *supra* note 5, exhibits 30 & 35 (showing a general trend towards lower spreads since mid-1990).

277. There is some evidence that commissions have only dropped for institutional investors, while retail commissions have increased. Taylor, *supra* note 31, at A1.

278. The SEC has recently adopted a new rule, which streamlines the SEC’s rule change approval process for the existing exchanges. Proposed Rule Changes of Self Regulatory Organizations, *supra* note 275. This new rule should help alleviate one of the regulatory differentials about which the exchanges have most frequently complained. Completely equivalent regulation for computerized systems run by exchanges and PTSs, however, may never be appropriate, as an investor may expect more regulation, and thus more protection, in a system that is sponsored by an exchange rather than by a private entity.

279. Rule 17a-23 Proposal Release, *supra* note 99, at 8371 n.26 (noting that economic incentives are not sufficient to prevent fraud).

280. Some commentators believe that further computerization of the market will eventually result in complete market automation. Power, *supra* note 85, at A1 (quoting William C. Freund, former chief economic of the NYSE, who claims “the days of physical trading floors are numbered. Fully computerized trading will become a reality.”).

